Appendices

Appendix A
NOP and Responses

NOTICE OF PREPARATION
OF ENVIRONMENTAL IMPACT REPORT
FOR CALIFORNIA STATE UNIVERSITY LONG BEACH CAMPUS MASTER PLAN

Project Title: Campus Master Plan

Location: California State University (CSU), Long Beach – generally bounded by East 7th Street to the south, East Atherton Street to the north, Bellflower Boulevard to the west, and Palo Verde Avenue to the east. The campus is surrounded by a mix of commercial, residential, and institutional uses.

Description: CSU Long Beach will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for a comprehensive update of the Campus Master Plan. Due to area-wide and regional growth in student population, new academic, support, and other campus facilities are needed to accommodate a gradual growth in enrollment up to 31,000 FTE (full-time equivalent) students by the 2015/2016 academic year.

The CSU Long Beach completed an Initial Study for the project which indicates that the project may potentially have significant environmental impacts with regards to traffic, air quality, public utilities and services, noise, and other issues. All these issues will be addressed in the EIR being prepared by the CSU Long Beach.

Public Review: The Initial Study is on file at the Office of Physical Planning and Facilities Management and the University Library on the campus of CSU Long Beach located at 1250 Bellflower Boulevard, and Los Altos Neighborhood Library at 5614 East Britton Drive in Long Beach. The Initial Study document will be available for a 30-day public review during regular business hours, beginning on June 22, 2007. Any persons wishing to comment may submit their comments in writing so the comments are received no later than July 23, 2007 to Susan Brown, Director, Physical Planning and Facilities Management, 1250 Bellflower Boulevard, BH370, Long Beach, CA 90840-0127, or by fax at (562) 985-7647.

Initial Study

Campus Master Plan

California State University,
Long Beach

June 2007

HDR | ONE COMPANY *Many Solutions*℠

Initial Study

Campus Master Plan

California State University, Long Beach

June 2007

Lead Agency
The Trustees of the California State University
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH370
Long Beach, CA 90840-0127

Consultant to Lead Agency
HDR Engineering, Inc.
801 South Grand Avenue, Suite 500
Los Angeles, CA 90017

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Environmental Checklist Form

1. **Project Title:** 2007 Campus Master Plan

2. **Lead Agency Name and Address:** The Trustees of the California State University
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH370
Long Beach, CA 90840-0127

3. **Contact Person and Phone Number:** Susan Brown, Director
Physical Planning and Facilities Management
(562) 985-4131

4. **Project Location:** CSU Long Beach campus - generally bounded by East 7th Street to the south, East Atherton Street to the north, Bellflower Boulevard to the west, and Palo Verde Avenue to the east. Figure 1 illustrates the campus' location.

5. **Project Sponsor's Name and Address:** Same as the Lead Agency

6. **Campus Master Plan Designation:** Various

7. **Zoning:** n/a

8. **Description of Project:** The project is the comprehensive update of the Campus Master Plan for the CSU Long Beach to accommodate a gradual growth in student enrollment projected to reach 31,000 full-time equivalent students (FTEs) by the 2015/2016 academic year. As of Fall 2006, the University's student enrollment had reached approximately 26,440 FTEs.

   The State Legislature's commitment to accommodating student demand and providing access to higher education is reflected in the rise in student enrollment ceilings throughout the CSU, as well as the UC, University systems. At CSU Long Beach, the last FTE ceiling increase to 25,000 FTE occurred in 1972. It has taken 35 years to reach this enrollment level. The campus anticipates an average annual growth rate of about 2% - 2.5% to reach the new ceiling, assuming the same level of State funding as currently provided. With some CSU campuses raising their ceiling levels to 35,000 FTEs, the proposed Campus Master Plan represents about half of the increase of other large CSU campuses.

   Located approximately 3 miles from the Pacific Ocean, the CSU Long Beach campus spans 323 acres with 84 buildings. Established in 1949 by California Governor Earl Warren, CSU Long Beach has grown to be one of the most well respected universities in California.

   CSU Long Beach aims to achieve greater distinction with four strategic priorities: student success, academic quality, service excellence, and campus life and environment. To that end, in 2003, CSU Long Beach launched a master planning process to examine long-range enrollment and the campus physical plan. A master planning framework was established to accommodate

31,000 FTEs and outline stipulations for growth. In the Spring of 2004, this framework was endorsed by the Academic Senate and the President and in fall 2006 was re-affirmed by the Academic Senate. The framework creates stipulations related to the quality of instruction; parking and traffic; green space; the quality of the student experience; resources; diversity; tenure faculty density; student retention and graduation rates; and program balance.

Existing Facilities: Existing campus educational facilities comprise approximately 3.2 million gross square feet with approximately 1.9 million of assignable square feet. These include traditional academic buildings, administrative offices, a student union, library, and bookstore, and food service facilities. The campus facilities also include student dormitories, support facilities, and parking structures. Figure 2 illustrates existing facilities and future facilities that are approved pursuant to the current Master Plan.

The University architecture is mostly of the international style, placing emphasis on open landscaped areas throughout campus creating a natural, park-like setting. Landscaping and architecture are integrated in semi-formal quadrangles, courtyards, rolling grass-covered hills, and sculptured tree canopies. The campus buildings primarily are comprised of brick, glass, and concrete. Modernist proportioning, flat roofs, punched windows, and the consistent use of peach-colored brick tie the campus together. One exception is the blue Walter Pyramid, which provides a noteworthy contrast on campus and serves as an icon for the University and the City of Long Beach.

Proposed Campus Master Plan: The proposed Master Plan identifies primary physical facilities required to accommodate CSU Long Beach's strategic and academic plans (refer to Figure 3). With enrollment growth anticipated to reach approximately 31,000 FTEs, the Plan provides for the required instructional, research, faculty office and administrative space, student services areas, student housing, sports and recreation, parking, and support facilities. Campus goals for the 2007-2010 period address these areas of planning: (1) human resources, (2) enrollment, (3) student retention and graduation, (4) physical facilities and environment, (5) resources and quality improvement, (6) information technology, and (7) external support and partnerships.

The Master Plan is designed to first provide new in-fill facilities in the interior of the campus and replacing the existing aged, obsolete, and inefficient facilities. These facilities include three liberal arts replacement buildings, two new parking structures, a student services addition to Brotman Hall, student housing, and a soccer field and sports buildings. The existing aged and obsolete buildings will be demolished and replaced with new modern facilities at approximately the same locations, providing program areas required to support the academic plan that cannot be accommodated within existing buildings. Areas identified for reconstruction are the student services addition, liberal arts area, and science area. Associated infrastructure improvements will be provided as needed throughout the campus.

The Campus Master Plan protects open spaces, pedestrian corridors, and campus architectural themes. Overall, the Master Plan aims to enhance the University's distinct character, update and expand campus infrastructure, and preserve the quality of the physical environment. The Plan also reflects the University's intent to minimize facility growth on the perimeter of the campus.

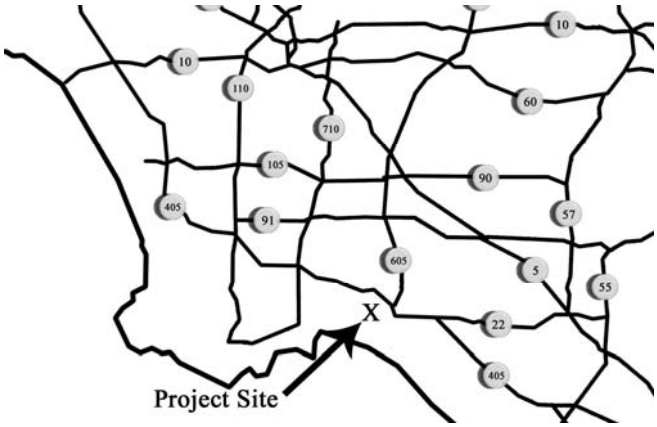
9. **Surrounding Land Uses and Setting:** The campus is generally bordered and separated from the surrounding uses by Atherton Street, Palo Verde Drive, State University Drive, Seventh Street, West Campus Drive, Beach Drive, and Bellflower Boulevard. The uses across these streets consist predominantly of single-family residential areas, but also include multiple-family residences, institutional uses, and commercial businesses. The Veteran's Administration Medical Center complex borders the campus to the southwest. Commercial uses are located to the northwest of the campus on the south side of Atherton Street, in the vicinity of its intersection with Bellflower Boulevard, and Whaley Park straddles Atherton Street within this area. Mini Gant Elementary School is located on the north side of Atherton Street across from the campus' northern boundary. Station 22 of the City of Long Beach Fire Department is located at the northeast corner of campus at the intersection of Atherton Street and Palo Verde Avenue. A Los Angeles County electrical substation is located on Atherton, immediately west of Station 22. Hill Middle School is located about one block southeast of campus. The Los Cerritos flood control channel runs north-south about 1,200 feet to the east of campus, with the San Gabriel River running north-south about 1,200 feet to the east beyond that. Alamitos Bay and the Long Beach marina are located about a half mile south of the University campus in the general vicinity.

10. The Campus Master Plan and subsequent implementing actions are subject to review and approval by the Trustees of the California State University.

Other public agencies whose input will be sought:

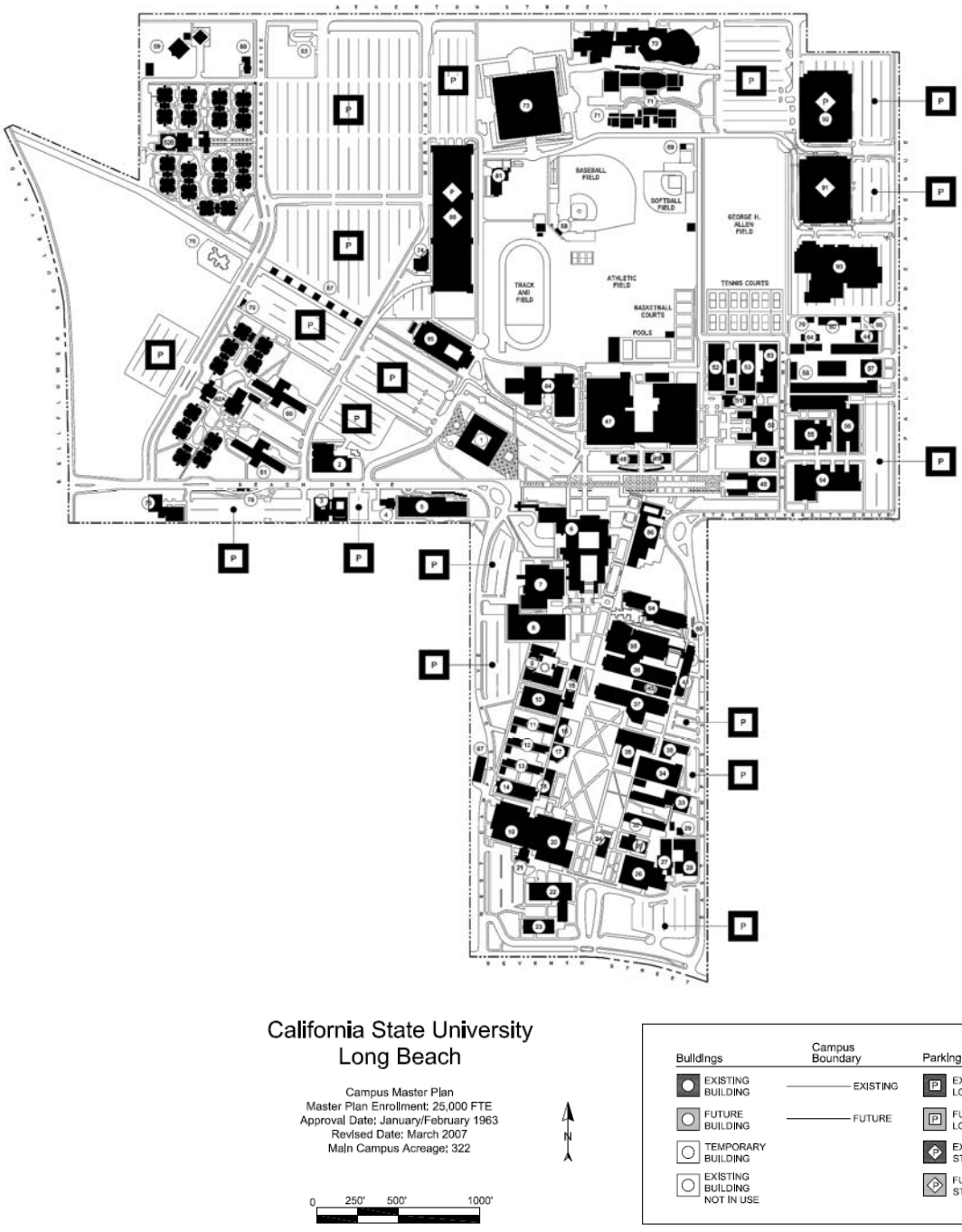
- City of Long Beach
- County of Los Angeles Sanitation Districts
- Caltrans, District 7
- Others, as may be necessary

Campus Location
Figure 1



Source: California State University, Long Beach, 2007; Google Earth.

Existing Campus Master Plan
Figure 2



Source: California State University Long Beach, June 2007.

Existing Master Plan Legend

1 E. James Brotman Hall
2 Student Health Services
3 Nursing
4 Soroptimist House
5 Family and Consumer Sciences
6 University Student Union
7 Cafeteria
8 Bookstore
9 Psychology
10 Liberal Arts 5
11 Liberal Arts 4
12 Liberal Arts 3
13 Liberal Arts 2
14 Liberal Arts 1
15 Faculty Office 3
16 Faculty Office 2
17 Lecture Hall 150-151
18 KKJZ
19 Library
20 Academic Services
21 Multi-Media Center
22 Education 1
23 Education 2
24 Mcintosh Humanities Office Building
25 Language Arts Building
26 Studio Theatre
27 University Theatre
28 University Telecommunications Center
29 Art Annex
32 Fine Arts 1
33 Fine Arts 2
34 Fine Arts 3
35 Fine Arts 4
36 Faculty Office 4
37 Peterson Hall 1
38 Peterson Hall 2
39 Peterson Hall 3
40 Science Lecture Halls
41 Microbiology
42 Animal House
43 Greenhouse 1 and 2
44 Electrical Substation (North)
45 Faculty Office 5
46 Social Sciences / Public Affairs
47 University Gymnasiums
48 Health and Human Services Classrooms
49 Health and Human Services Offices
50 Vivian Engineering Center
51 Engineering 2
52 Engineering 3
53 Engineering 4
54 Design
55 Human Services & Design
56 Engineering Technology
57 Facilities Management
58 Corporation Yard
59 Patterson Child Development Center
60 Los Alamitos Hall
61 Los Cerritos Hall
62 Residence Halls and Commons
63 Recycling Center
64 Greenhouse 3
65 Electrical Substation (South)
66 Reprographics
67 Communications - Main Distribution Facility A
68 Restrooms / Storage
69 Softball Field Restrooms
70 Communications - Main Distribution Facility B
71 University Music Center
72 Carpenter Performing Arts Center & Dance Center
73 Mike and Arline Walter Pyramid
74 Parking / Transportation Services
75 International House
76 Earl Burns Miller Garden
78 Visitor Information Center
79 Communications - Main Distribution Facility C
80 University Police
81 Pyramid Annex
82 Outpost Food Service
83 Engineering / Computer Science
84 Steve and Nini Horn Center
85 College of Business
86 Central Plant
87 Campus Housing
88 Parking Structure No. 1
89 Housing & Residential Life
91 Parking Structure No. 2
92 Parking Structure No. 3
93 Student Recreation & Wellness Center
94 Molecular and Life Sciences Center
95 Peterson Hall Replacement Building

00 Miller House (Located Off Site)

Preliminary Conceptual Master Plan
Figure 3

Source: California State University, Long Beach, Draft Campus Master Plan, May 2007.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☒ Air Quality
☐ Biological Resources	☒ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☒ Noise	☐ Population/Housing
☒ Public Services	☐ Recreation	☒ Transportation/Traffic
☒ Utilities/Service Systems	☒ Mandatory Findings of Significance	

Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Susan Brown

Signature

June 20, 2007

Date

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the project area and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a and c. The Master Plan is expected to have a beneficial impact on campus aesthetics by working to preserve and enhance campus character through architectural and landscape design. Nevertheless, aesthetics issues will be addressed by the EIR.

b. State Route 1 (i.e., Pacific Coast Highway), which is eligible for scenic highway designation, lies southwest of campus. Views of the campus from this highway are limited, and will not substantially change as a result of the Master Plan. No adverse impact is anticipated, and this issue will not be discussed in the EIR.

c. The new facilities will be located within an illuminated urban area and will not result in the substantial changes to the existing light levels on campus. However, since one proposed facility - the soccer field and its sports buildings may include new lighting, the issues associated with this facility will be addressed in the EIR.

II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Project area Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

a through c. The campus does not accommodate any designated farmland. No agricultural uses are located in the vicinity. No agricultural zoning or Williamson Act contracts exist within the campus or in the vicinity. No impact to agricultural resources will result.

III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

a through d. The campus is located within the South Coast Air Basin, which continues to exceed Federal and State ambient air quality standards for ozone and particulate matter (PM10). Accommodating the projected growth in student enrollment in new facilities and improvements provided pursuant to the Campus Master Plan has a potential to generate exhaust emissions and short-term construction-related emissions. These issues will be addressed in the EIR.

e. University operations typically do not result in objectionable odors. No adverse impact will result, and this issue will not be addressed further in the EIR.

IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

a through f. The campus is surrounded by urban development, including structures, pavement, and ornamental landscaping. No native resident or migratory fish or wildlife species, native resident or migratory wildlife corridors, or native wildlife nursery sites are known to be located within or adjacent to campus. No species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulation, or by the California Department of Fish and Games (CDFG) or U.S. Fish and Wildlife Service (USFWS) are known to live, forage, or visit on campus. No riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFG or USFWS exist within CSU Long Beach and the surrounding area. No federally protected wetlands (as defined by Section 404 of the Clean Water Act), wildlife nurseries, wildlife corridors, natural communities, or habitats exist on or near campus. The University site is not included in any habitat conservation plan, and no local policies regarding biological resources are applicable to the campus. No adverse impact on biological resources will occur and this issue will not be addressed in the EIR.

V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or project area or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

a. No structures or features on campus are considered historic resources. No adverse impact will result and this issue will not be addressed in the EIR.

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact

b and d. Archaeological resources are known to exist on campus, and while the Master Plan is not anticipated to adversely affect any such resources, these issues, including mitigation measures to reduce the potential for impact, will be addressed in the EIR.

c. The campus does not accommodate unique geologic features. No paleontological resources are known to be located on campus or in the vicinity. No adverse impact will result, and these issues will not be addressed in the EIR.

VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-project area landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

a through d. Portions of the campus are subject to liquefaction. No part is subject to landslides and on-site soils are not known to be unstable. All facilities and improvements constructed pursuant to the Master Plan will comply with all applicable regulations and standard University procedures designed to ensure the required level of geotechnical and seismic safety. These include site-specific geotechnical investigation, the use of identified specific engineering methods and design specifications, and a review and approval process for each individual facility plans for compliance with seismic safety requirements. Mandatory compliance with these existing regulations, requirements, and procedure will ensure that no significant impact will result, and these issues will not be addressed in the EIR.

e. The campus is served by sewers, and no septic tanks or alternative wastewater disposal systems exist or will be required. No adverse impact will result, and this issue will not be addressed in the EIR.

VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

a through d. The new academic, administrative, and support facilities will not involve the routine use, transport, or disposal of hazardous materials. On-site use of hazardous materials will continue to be limited to small amount of everyday janitorial cleaners and common chemicals used for landscaping and maintenance. Materials used for laboratory academic research and instructions will continue to be handled and disposed of in accordance with established University procedures. The University's environmental health and safety staff will continue to monitor the use of hazardous materials in science instructions to ensure safe and lawful handling, movement, storage, and disposal of such materials. Impact will be less than significant and these issues will not be addressed in the EIR.

e through h. The campus is not located in the vicinity of any private airstrip, nor is it located within any airport land use plan. Long Beach Municipal Airport is located approximately 1.6 mile to the northwest of the campus edge, but risk from aircraft overflights is limited due to the distance to the airport. The campus is not located within any safety zone of the airport, and no tall buildings that might affect aircraft operations are proposed. The Master Plan will provide for orderly development of the campus facilities, and will not impair implementation of or physically interfere with any adopted emergency response or evacuation plan. The campus is not located in the vicinity of any wildlands. No adverse impact will result, and these issues will not be addressed in the EIR.

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site area?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

a, c through f. New facilities and infrastructure improvements will be constructed pursuant to the Master Plan. While the implementation of the Master Plan is anticipated not to result in substantial effects, issues related to water quality and drainage will be addressed in the EIR.

b. Water use on campus pursuant to the Master Plan is not expected to result in substantially increased groundwater pumping, if any at all. Increased area of impermeable surfaces due to new facilities and improvements will be minimal. Impact on groundwater will be less than significant and this issue will not be addressed in the EIR.

g and h. The Campus Master Plan provides for new structures and facilities within the existing campus. No substantial change in exposure to flood hazards will occur. According to the City of Long Beach flood zone maps, the campus is not located in any zone in which flood insurance is still required by the federal government. No adverse impact is anticipated, and these issues will not be addressed in the EIR.

i and j. No bodies of water, levees, or dams are located uphill from campus; therefore, the campus is not exposed to seiche and/or flooding due to dam or levee failure. The campus is located at a distance of approximately 3 miles from the ocean and at elevation, and is not susceptible to damage from tsunami. The campus and surrounding areas are relatively flat; no hills or unstable lands are located in the vicinity, and no mudflows are known to affect the campus. No adverse impact will result, and this issue will be discussed in the EIR.

IX. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a through c. The project is a comprehensive update of the Campus Master Plan that continues University uses of its campus. No facilities that might conflict with existing on- or off-campus uses are part of the Master Plan. The proposed Master Plan is consistent with and implements the CSU Long Beach's planning goals. The facilities and improvements provided pursuant to the Master Plan are infill development within an existing campus that will not divide any established community. No natural community or habitat conservation plans apply to campus. No adverse impact is anticipated and these issues will not be addressed in the EIR.

X. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery project area delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

a and b. The campus is not known to contain any important mineral resources. Therefore, the Master Plan will not result in the loss of any such resources. No adverse impact will result, and this issue will not be addressed in the EIR.

XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a, c, and d. Construction of new facilities and improvements pursuant to the Master Plan will result in noise associated with vehicular trips, construction of new facilities and improvements, and day-to-day campus activities. This issue, including short-term noise associated with construction of individual facilities that include a new Parking Structure 3 provided pursuant to the current Master Plan, will be examined in the EIR.

b. Long-term facilities and improvements provided pursuant to the Master Plan will continue the University uses and functions that do not to involve generating excessive vibration or groundborne noise. No adverse impact will result, and this issue will not be addressed in the EIR.

e and f. No private airstrips are located in the campus. Long Beach Municipal Airport is located about 1.6 miles from the campus edge. According to the Los Angeles County Airport Land Use Plan, airport noise at the campus does not exceed 65 CNEL. No significant impact will result, and this issue will not be discussed in the EIR.

XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a through c. The implementation of the Campus Master Plan will provide additional on-campus student housing, and will not displace any housing or people. The proposed Master Plan is designed to accommodate projected gradual increase in student enrollment resulting from growth and development within the area and the Southern California region and by itself, will not induce substantial population growth or housing demand. The University is primarily a commuter campus with the majority of students and faculty already residing within the surrounding area and the greater region and commuting to campus from their residences. This pattern will continue under the proposed Master Plan. Nearby areas are fully urbanized and served by existing infrastructure, and the provision of the University facilities within the campus has no potential to induce significant growth in the surrounding areas or the region. No significant impact will result, and these issues will not be addressed in the EIR.

XIII. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact

a. The police protection services on campus are provided by the University's own Police Department The campus police are supported as needed by the City of Long Beach Police Department and by Station 22 of the Long Beach Fire Department. While these existing facilities and resources are anticipated to continue to adequately serve the campus, the particulars of the existing and future police and fire protection facilities and systems will be addressed in the EIR. The Master Plan provides needed facilities to accommodate the projected student enrollment and has no potential to generate a substantial demand for schools.

The Master Plan provides for new and enhanced recreation and wellness facilities and open space within the campus to serve the projected student enrollment and will not create a need for construction of new parks in the surrounding communities. The Master Plan also provides for adequate student and faculty support facilities - including library, food/dinning, student housing, parking structures, and other facilities, and will not generate a need for construction of new public facilities in the surrounding community. No adverse impact will result and these issues will not be addressed in the EIR.

XIV. RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

a and b. The Master Plan includes preservation and enhancement of on-campus open space and new recreation facilities for students, faculty, and staff, including a recreation and wellness center. Thus, no construction of neighborhood or regional parks or other recreation facilities will be required. Impact will be less than significant and these issues will not be discussed further in the EIR. However, the effects associated with the provision of the soccer field and sports buildings facility on campus will be addressed in the EIR.

XV. TRANSPORTATION/TRAFFIC – Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

a and b. The Master Plan provides for additional student housing on campus which will reduce commuter trips to campus. However, since the gradual increase in student enrollment accommodated by the Master Plan will result in vehicle trips in vicinity of the University, a traffic study will prepared as part of the EIR to address these issues.

c through e. The Master Plan will not result in any change in demand for air travel. The Master Plan does not provide for any uses that might be incompatible with nearby on- and off-campus uses. No substantial changes to the existing street system will occur and no obstructions to any emergency access, either in the long term or during construction of individual facilities and improvements, will occur. No adverse impact will result, and these issues will not be addressed in the EIR.

f. The Master Plan includes new parking facilities to accommodate the gradual growth in student enrollment Two additional parking structures are included in the Master Plan to keep students from parking in surrounding neighborhoods, and no significant impact is anticipated. Nonetheless, this issue will be addressed in the EIR as part of the traffic study.

g. Alternative transportation programs will continue to be implemented and enhanced pursuant to the Master Plan. Bicycle parking and campus shuttle services will be provided for all new facilities, as appropriate. Impact will be beneficial, and this issue will not be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, State, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

a. New facilities provided pursuant to the Master Plan will continue to include academic, administrative, and support facilities serving the University students, faculty, and staff. Wastewater generated by the new facilities will be similar to existing flows. The quality of wastewater flows associated with these typical urban educational uses meet all applicable requirements. No adverse impact will result, and this issue will not be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact

b through f. The daily water use, generation of wastewater, solid waste, and stormwater runoff will increase as a result of the increase in the projected student enrollment and provision of new facilities on campus. The Master Plan may include the provision of water, sewer, and/or drainage infrastructure improvements. The University's current recycling and other waste-reduction programs will continue. These issues will be further addressed in the EIR.

g. The University will continue to implement solid waste reduction programs, including recycling, reuse, and required diversion. CSU Long Beach complies with all pertinent regulations regarding solid waste. No adverse impact will result and this issue will not be discussed in the EIR.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact

a. The implementation of the Campus Master Plan will provide new facilities and improvements within an existing urban University campus surrounded by residential, institutional, commercial, and other urban development within the City of Long Beach. The Master Plan preserves opens space resources on campus and will not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Nonetheless, the issue of potential impact on certain resources, such as archaeological resources, will be addressed in the EIR.

b. The area-wide growth, and the growth and development within the City of Long Beach - including in the areas surrounding the campus may result in significant air quality, noise, traffic, and other impacts. While the effects of the Master Plan itself will be relatively limited, when combined together with the effects of the area-wide growth and development the cumulative impacts may be significant. These issues will be addressed in the EIR.

c. The Master Plan will result in the provision of needed facilities and improvements at the CSU Long Beach campus. These facilities and improvements are necessary to continue the University functions and the provision of higher education opportunities for the residents of the surrounding areas and the State as reflected by the projected student enrollment, with no potential to result in substantial adverse effects on people.

References

California State University, Long Beach. Campus Master Plan, as revised.

California State University, Long Beach. Campus Master Plan January V2 2007 Draft. Rossetti Jorgensen. 2007.

California State University, Long Beach. Strategic Priorities and Goals 2007-2010. March 6, 2007.

California State University, Long Beach. Physical Master Plan Committee Findings.

California State University, Long Beach. www.csulb.edu.

Google Earth. 2007.

Los Angeles County Airport Land Use Commission. Comprehensive Land Use Plan. Adopted December 19, 1991. Revised December 1, 2004.

City of Long Beach. Flood Zone Map. Effective 1/11/02.

Preparers of the Initial Study

Lead Agency

The Trustees of the California State University
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH370
Long Beach, CA 90840-0127

Contact Person: Susan Brown, Director of Physical Planning
Phone: (562) 985-4131
Fax: (562) 985-7647

Consultant to the Lead Agency

HDR Engineering, Inc.
801 South Grand Avenue, Suite 500
Los Angeles, CA 90017

Irena Finkelstein, AICP	Project Manager
Joshua Hart, AICP	Senior Environmental Analyst
Nicolas Gustafson	Environmental Analyst

Phone: (213) 239-5800
Fax: (213) 239-5801

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

RECEIVED

JUN 26 2007

PHYSICAL PLANNING AND
FACILITIES MANAGEMENT

Notice of Preparation

June 21, 2007

To: Reviewing Agencies

Re: Campus Master Plan
SCH# 2007061092

Attached for your review and comment is the Notice of Preparation (NOP) for the Campus Master Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Susan Brown
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH 370
Long Beach, CA 90840-0127

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency
c: Irena Finkelstein, HDR

Document Details Report
State Clearinghouse Data Base

SCH# 2007061092
Project Title Campus Master Plan
Lead Agency California State University, Long Beach

Type NOP Notice of Preparation

Description Due to area-wide and regional growth in student population, new academic, support, and other campus facilities are needed to accommodate a gradual growth in enrollment up to 31,000 FTE (full time equivalent) students by the 2015/2016 academic year. A Campus Master Plan is being prepared that provides for required instructional, research, faculty office, and administrative space, student services areas, student housing, sports and recreation, parking, and support facilities.

Lead Agency Contact

Name Susan Brown
Agency California State University, Long Beach
Phone (562) 985-4131 **Fax**
email
Address Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH 370
City Long Beach **State** CA **Zip** 90840-0127

Project Location

County Los Angeles
City Long Beach
Region
Cross Streets Generally bounded by Bellflower Blvd., Atherton St., Palo Verde Ave., and 7th St.
Parcel No. Various
Township **Range** **Section** **Base**

Proximity to:

Highways I-405, I-605, 1, 22
Airports
Railways
Waterways Los Cerritos Channel, San Gabriel River, Alamitos Bay
Schools Various
Land Use Campus Master Plan

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Growth Inducing; Landuse; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife

Reviewing Agencies Caltrans, Division of Aeronautics; Caltrans, District 7; California Highway Patrol; Department of Conservation; Department of Water Resources; Department of Fish and Game, Region 5; Office of Historic Preservation; Native American Heritage Commission; Department of Parks and Recreation; Resources Agency; Integrated Waste Management Board; State Water Resources Control Board, Division of Loans and Grants; Department of Toxic Substances Control

Date Received 06/21/2007 **Start of Review** 06/21/2007 **End of Review** 07/20/2007

Note: Blanks in data fields result from insufficient information provided by lead agency.

County: LOS ANGELES SCH# 2007061092

Resources Agency

- [■] **Resources Agency** Nadell Gayou
- [ ] **Dept. of Boating & Waterways** David Johnson
- [ ] **California Coastal Commission** Elizabeth A. Fuchs
- [ ] **Colorado River Board** Gerald R. Zimmerman
- [ ] **Dept. of Conservation** Sharon Howell
- [ ] **California Energy Commission** Paul Richins
- [ ] **Dept. of Forestry & Fire Protection** Allen Robertson
- [ ] **Office of Historic Preservation** Wayne Donaldson
- [■] **Dept of Parks & Recreation** Environmental Stewardship Section
- [ ] **Reclamation Board** DeeDee Jones
- [ ] **S.F. Bay Conservation & Dev't. Comm.** Steve McAdam
- [ ] **Dept. of Water Resources** Resources Agency Nadell Gayou
- [ ] _____ Conservancy

Fish and Game

- [ ] **Depart. of Fish & Game** Scott Flint Environmental Services Division
- [ ] **Fish & Game Region 1** Donald Koch
- [ ] **Fish & Game Region 1E** Laurie Harnsberger
- [ ] **Fish & Game Region 2** Banky Curtis
- [ ] **Fish & Game Region 3** Robert Floerke
- [ ] **Fish & Game Region 4** Julie Vance
- [ ] **Fish & Game Region 5** Don Chadwick Habitat Conservation Program
- [ ] **Fish & Game Region 6** Gabrina Gatchel Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M** Gabrina Getchel Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M** George Isaac Marine Region

Other Departments

- [ ] **Food & Agriculture** Steve Shaffer Dept. of Food and Agriculture
- [ ] **Depart. of General Services** Public School Construction
- [ ] **Dept. of General Services** Robert Sleppy Environmental Services Section
- [ ] **Dept. of Health Services** Veronica Malloy Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission** Debby Eddy
- [ ] **Office of Emergency Services** Dennis Castrillo
- [ ] **Governor's Office of Planning & Research** State Clearinghouse
- [■] **Native American Heritage Comm.** Debbie Treadway
- [ ] **Public Utilities Commission** Ken Lewis
- [ ] **Santa Monica Bay Restoration** Guangyu Wang
- [ ] **State Lands Commission** Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)** Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics** Sandy Hesnard
- [ ] **Caltrans - Planning** Terri Pencovic
- [ ] **California Highway Patrol** Shirley Kelly Office of Special Projects
- [ ] **Housing & Community Development** Lisa Nichols Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1** Rex Jackman
- [ ] **Caltrans, District 2** Marcelino Gonzalez
- [ ] **Caltrans, District 3** Jeff Pulverman
- [ ] **Caltrans, District 4** Tim Sable
- [ ] **Caltrans, District 5** David Murray
- [ ] **Caltrans, District 6** Marc Birnbaum
- [ ] **Caltrans, District 7** Cheryl J. Powell
- [ ] **Caltrans, District 8** Dan Kopulsky
- [ ] **Caltrans, District 9** Gayle Rosander
- [ ] **Caltrans, District 10** Tom Dumas
- [ ] **Caltrans, District 11** Mario Orso
- [ ] **Caltrans, District 12** Bob Joseph

Cal EPA

Air Resources Board

- [ ] Airport Projects Jim Lerner
  - [ ] Transportation Projects Ravi Ramalingam
  - [ ] Industrial Projects Mike Tollstrup
- [ ] **California Integrated Waste Management Board** Sue O'Leary
- [ ] **State Water Resources Control Board** Regional Programs Unit Division of Financial Assistance
- [ ] **State Water Resources Control Board** Student Intern, 401 Water Quality Certification Unit Division of Water Quality
- [ ] **State Water Resouces Control Board** Steven Herrera Division of Water Rights
- [ ] **Dept. of Toxic Substances Control** CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1** Cathleen Hudson North Coast Region (1)
- [ ] **RWQCB 2** Environmental Document Coordinator San Francisco Bay Region (2)
- [ ] **RWQCB 3** Central Coast Region (3)
- [ ] **RWQCB 4** Teresa Rodgers Los Angeles Region (4)
- [ ] **RWQCB 5S** Central Valley Region (5)
  - [ ] **RWQCB 5F** Central Valley Region (5) Fresno Branch Office
  - [ ] **RWQCB 5R** Central Valley Region (5) Redding Branch Office
- [ ] **RWQCB 6** Lahontan Region (6)
  - [ ] **RWQCB 6V** Lahontan Region (6) Victorville Branch Office
- [ ] **RWQCB 7** Colorado River Basin Region (7)
- [ ] **RWQCB 8** Santa Ana Region (8)
- [ ] **RWQCB 9** San Diego Region (9)

- [ ] **Other** _____

Last Updated on 05/16/07

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JUN 26 2007

PHYSICAL PLANNING AND FACILITIES MANAGEMENT

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

6/27/07 cc: Irena Finkelstein

June 22, 2007

Ms. Susan Brown
Director, Physical Planning and Facilities Management
California State University (CSU) Long Beach
1250 Bellflower Boulevard, BH370
Long Beach, CA 90840-0127

Dear Ms. Brown:

Notice of Preparation of a Draft Environmental Impact Report (Draft EIR) for the Campus Master Plan

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The SCAQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft environmental impact report (EIR). Please send the SCAQMD a copy of the Draft EIR upon its completion. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality analysis and electronic versions of all air quality modeling and health risk assessment files. Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. Alternatively, the lead agency may wish to consider using the California Air Resources Board (CARB) approved URBEMIS 2002 Model. This model is available on the SCAQMD Website at: www.aqmd.gov/ceqa/models.html.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has developed a methodology for calculating PM2.5 emissions from construction and operational activities and processes. In connection with developing PM2.5 calculation methodologies, the SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD requests that the lead agency quantify PM2.5 emissions and compare the results to the recommended PM2.5 significance thresholds. Guidance for calculating PM2.5 emissions and PM2.5 significance thresholds can be found at the following internet address: http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html.

In addition to analyzing regional air quality impacts the SCAQMD recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized significance analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

It is recommended that lead agencies for projects generating or attracting vehicular trips, especially heavy-duty diesel-fueled vehicles, perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis") can be found on the SCAQMD's CEQA web pages at the following internet address: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additional mitigation measures can be found on the SCAQMD's CEQA web pages at the following internet address: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html Additionally, SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html. In addition, guidance on sitting incompatible land uses can be found in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Perspective, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's World Wide Web Homepage (http://www.aqmd.gov).

The SCAQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Charles Blankson, Ph.D., Air Quality Specialist, CEQA Section, at (909) 396-3304 if you have any questions regarding this letter.

Sincerely,

Steve Smith

Steve Smith, Ph.D.
Program Supervisor, CEQA Section
Planning, Rule Development and Area Sources

SS:CB:LI
LAC070621-03AK
Control Number

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

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JUN 29 2007
PHYSICAL PLANNING AND
FACILITIES MANAGEMENT

June 27, 2007

File No: 03-00.00-00
19-00.00-00

Ms. Susan Brown, Director
Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH 370
Long Beach, CA 90840-0127

Dear Ms. Brown:

California State University Long Beach Campus Master Plan

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation and Initial Study for the subject project on June 21, 2007. The proposed development is located within the jurisdictional boundaries of Districts Nos. 3 and 19. We offer the following comments regarding sewerage service:

1. The Districts maintain sewerage facilities within the project area that may be affected by the proposed project. Approval to construct improvements within a Districts' sewer easement and/or over or near a Districts' sewer is required before construction may begin. For a copy of the Districts' buildover procedures and requirements, go to www.lacsd.org, Wastewater Services, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the buildover procedure, please contact Mr. Ronnie Burtner at extension 2766.

2. The following is a list of Districts' trunk sewers that serve the project area.

Name	Location	Size (dia.)	Design Capacity (mgd)	Peak Flow (mgd)	Last Measured
Joint Outfall C Unit 5A Replacement Trunk Sewer	In State University Drive just west of Campus Road	12"	1.2	0.2	2004
Joint Outfall C Unit 4A Trunk Sewer	In Pacific Coast Highway west of Park Avenue	51"	22.8	11.9	2004

2. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 400 mgd and currently processes an average flow of 313.7 mgd, or the Long Beach Water Reclamation Plant, which has a design capacity of 25 mgd and currently processes an average flow of 15.6 mgd.

3. The expected increase in average wastewater flow from the project site is 20 gallons per day per student. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org,

Recycled Paper

Information Center, Wastewater Services, Obtain Will Serve Letter, and click on the appropriate link on page 2.

4. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or increasing the existing strength and/or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is required to construct an incremental expansion of the Sewerage System to accommodate the proposed project, which will mitigate the impact of this project on the present Sewerage System. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Information Center, Wastewater Services, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

5. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Stephen R. Maguin

Ruth I. Frazen
Engineering Technician
Facilities Planning Department

RIF:rf

cc: R. Burtner

Long Beach Water Department
The Standard in Water Conservation &
Environmental Stewardship

June 28, 2007

Irena Finkelstein
AICP, On behalf of CSULB
HDR Engineering, Inc.
801 South Grand Avenue, Suite 500
Los Angeles, CA 90017

Subject: Public review period for the NOP for the Campus Master Plan project at CSULB

Dear Ms. Finkelstein:

For your records, be advised that I received your Environmental Document Transmittal regarding the above project, dated June 20, 2007, stating that if we wish to comment, to forward the comments to the contact person identified in the attached NOP, that person being Ms. Susan Brown and listing just her phone number, a number I left a message at on June 27, 2007, advising her that a cursory review of the project by my office indicated the need for the lead agency for this project to request of the Long Beach Water Department a water supply assessment.

Per SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912(a)) subject to the California Environmental Quality Act.

If you have any questions regarding this matter, you may contact me at the address below or at 562-570-2315.

Sincerely,

Matthew P. Lyons
Director of Planning and Conservation

cc: Project Lead Agency:

The Trustees of the CFSU
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH370
Long Beach, CA 90840-0127

06/28/07 1:12 PM D:\Planning\SB221 n SB610\CSULB 2007\070627 Ltr Recommend request WSA.doc

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY 711

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PHYSICAL PLANNING AND FACILITIES MANAGEMENT

Flex your power!
Be energy efficient!

June 28, 2007

Ms. Susan Brown
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH 370
Long Beach, CA 90840-0127

Dear Ms. Brown:

Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Campus Master Plan for California State University (CSU), Long Beach; SCH# 2007061092

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations, safety and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public-use and special-use airports and heliports.

The proposal is for the comprehensive update of the Campus Master Plan for CSU Long Beach to accommodate a gradual growth in student enrollment by. According to the NOP, the Master Plan is designed to first provide new in-fill facilities in the interior of the campus and replacing existing buildings.

The campus is located approximately one and a half miles southeast of the Long Beach; Daugherty Field Airport, beneath the extended centerline for Runway 12-30. Long Beach is an active airport with approximately 500 based aircraft and over 358,000 annual operations. The campus will be subject to aircraft overflight and subsequent aircraft-related noise and safety impacts.

Public Utilities Code, Section 21659 prohibits structural hazards on or near airports. According to page 16 of the NOP, "no tall buildings that might affect aircraft operations are proposed." We support this statement. However, depending on structural heights and in accordance with Federal Aviation Regulation Part 77 "Objects Affecting Navigable Airspace" a Notice of Proposed Construction or Alteration (Form 7460-1) may be required by the Federal Aviation Administration. Form 7460-1 is available on-line at http://forms.faa.gov/forms/faa7460-1.pdf.

The protection of airports from incompatible land use encroachment is vital to California's economic future. Long Beach; Daugherty Field Airport is an economic asset that should be protected through effective airport land use compatibility planning and awareness. Although the need for compatible and safe land uses near airports in California is both a local and a state issue, airport staff, airport land use commissions and airport land use compatibility plans are key to protecting an airport and the people residing and working in the vicinity of an airport. Consideration given to the issue of compatible land

uses in the vicinity of an airport should help to relieve future conflicts between airports and their neighbors.

These comments reflect the areas of concern to the Division with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our Caltrans District 7 office (213) 897-3656 concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. We look forward to reviewing the DEIR. If you have any questions, please call me at (916) 654-5314.

Sincerely,

Sandy Hesnard

SANDY HESNARD
Aviation Environmental Specialist

c: State Clearinghouse, John Wayne; Daugherty Field Airport, Los Angeles County ALUC

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
www.nahc.ca.gov
ds_nahc@pacbell.net

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PHYSICAL PLANNING AND
FACILITIES MANAGEMENT

July 6, 2007

Ms. Susan Brown, Director of Physical Planning
The Trustees of the California State University
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflwoer Boulevard, BH370
Long Beach, CA 90840-0127

Re: SCH# 2007061092; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for Campus Master Plan for California State University, Long Beach; Los Angeles County, California

Dear Ms. Brown:

Thank you for the opportunity to comment on the above-referenced document. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE),' and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the 'Information Center' nearest you is available from the State Office of Historic Preservation in Sacramento (916/653-7278). The record search will determine:

- If a part or the entire (APE) has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ Contact the Native American Heritage Commission (NAHC) for:

* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have information on cultural resources in or near the APE. Please provide us site identification as follows: USGS 7.5-minute quadrangle citation with name, township, range and section. This will assist us with the SLF.

- Also, we recommend that you contact the Native American contacts on the attached list to get their input on the effect of potential project (e.g. APE) impact.

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

√ Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: List of Native American Contacts

Native American Contacts
Los Angeles County
July 6, 2007

Cahuilla Band of Indians
Anthony Madrigal, Jr., Interim-Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
(951) 763-2631

(951) 763-2632 Fax

Diane Napoleone and Associates
Diane Napoleone
6997 Vista del Rincon Chumash
La Conchita , CA 93001
dnaassociates@sbcglobal.net
805-643-7492

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm. 403
Los Angeles , CA 90020
(213) 351-5324
(213) 386-3995 FAX

Gabrieleno/Tongva Tribal Council
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
ChiefRBwife@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 Fax

Ti'At Society
Cindi Alvitre
6602 Zelzah Avenue Gabrielino
Reseda , CA 91335
calvitre@yahoo.com
(714) 504-2468 Cell

Gabrielino/Tongva Council / Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
761 Terminal Street; Bldg 1, 2nd floor Gabrielino Tongva
Los Angeles , CA 90021
office @tongvatribe.net
(213) 489-5001 - Officer
(909) 262-9351 - cell
(213) 489-5002 Fax

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Adminstrator
4712 Admiralty Way, Suite 172 Gabrielino Tongva
Marina Del Rey , CA 90292
310-570-6567

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Tribal Chair/Cultural Resources
5450 Slauson, Ave, Suite 151 PMB Gabrielino Tongva
Culver City , CA 90230
gtongva@verizon.net
562-761-6417 - voice
562-920-9449 - fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed SCH#2007061092; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for Campus Master Plan for California State University, Long Beach; Los Angeles County, California.

Native American Contacts
Los Angeles County
July 6, 2007

Gabrielino Tongva Indians of California Tribal Council
Mercedes Dorame, Tribal Administrator
20990 Las Flores Mesa Drive Gabrielino Tongva
Malibu , CA 90265
Pluto05@hotmail.com

Cahuilla Band of Indians
Maurice Chacon, Cultural Resources
P.O. Box 391760 Cahuilla
Anza , CA 92539
cbandodian@aol.com
(951) 763-2631

(951) 763-2632 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed SCH#2007061092; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for Campus Master Plan for California State University, Long Beach; Los Angeles County, California.

SOUTHERN CALIFORNIA

ASSOCIATION of GOVERNMENTS

Main Office

818 West Seventh Street

12th Floor

Los Angeles, California

90017-3435

t (213) 236-1800

f (213) 236-1825

www.scag.ca.gov

Officers: President: Gary Ovitt, San Bernardino County • First Vice President: Richard Dixon, Lake Forest • Second Vice President: Harry Baldwin, San Gabriel • Immediate Past President: Yvonne B. Burke, Los Angeles County

Imperial County: Victor Carrillo, Imperial County • Jon Edney, El Centro

Los Angeles County: Yvonne B. Burke, Los Angeles County • Zev Yaroslavsky, Los Angeles County • Richard Alarcon, Los Angeles • Jim Aldinger, Manhattan Beach • Harry Baldwin, San Gabriel • Tony Cardenas, Los Angeles • Stan Carroll, La Habra Heights • Margaret Clark, Rosemead • Gene Daniels, Paramount • Judy Dunlap, Inglewood • Rae Gabelich, Long Beach • David Gafin, Downey • Eric Garcetti, Los Angeles • Wendy Greuel, Los Angeles • Frank Gurulé, Cudahy • Janice Hahn, Los Angeles • Isadore Hall, Compton • Keith W. Hanks, Azusa • José Huizar, Los Angeles • Jim Jeffra, Lancaster • Tom LaBonge, Los Angeles • Paula Lantz, Pomona • Barbara Messina, Alhambra • Larry Nelson, Artesia • Paul Nowatka, Torrance • Pam O'Connor, Santa Monica • Bernard Parks, Los Angeles • Jan Perry, Los Angeles • Ed Reyes, Los Angeles • Bill Rosendahl, Los Angeles • Greig Smith, Los Angeles • Tom Sykes, Walnut • Mike Ten, South Pasadena • Tonia Reyes Uranga, Long Beach • Antonio Villaraigosa, Los Angeles • Dennis Washburn, Calabasas • Jack Weiss, Los Angeles • Herb J. Wesson, Jr., Los Angeles • Dennis Zine, Los Angeles

Orange County: Chris Norby, Orange County • Christine Barnes, La Palma • John Beauman, Brea • Lou Bone, Tustin • Debbie Cook, Huntington Beach • Leslie Daigle, Newport Beach • Richard Dixon, Lake Forest • Troy Edgar, Los Alamitos • Paul Glaab, Laguna Niguel • Robert Hernandez, Anaheim • Sharon Quirk, Fullerton

Riverside County: Jeff Stone, Riverside County • Thomas Buckley, Lake Elsinore • Bonnie Flickinger, Moreno Valley • Ron Loveridge, Riverside • Greg Pettis, Cathedral City • Ron Roberts, Temecula

San Bernardino County: Gary Ovitt, San Bernardino County • Lawrence Dale, Barstow • Paul Eaton, Montclair • Lee Ann Garcia, Grand Terrace • Tim Jasper, Town of Apple Valley • Larry McCallon, Highland • Deborah Robertson, Rialto • Alan Wapner, Ontario

Tribal Government Representative: Andrew Masiel Sr., Pechanga Band of Luiseño Indians

Ventura County: Linda Parks, Ventura County • Glen Becerra, Simi Valley • Carl Morehouse, San Buenaventura • Toni Young, Port Hueneme

Orange County Transportation Authority: Art Brown, Buena Park

Riverside County Transportation Commission: Robin Lowe, Hemet

Ventura County Transportation Commission: Keith Millhouse, Moorpark

6.21.07

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PHYSICAL PLANNING AND FACILITIES MANAGEMENT

c: Drena Finkelstein HDR, Inc.

July 12, 2007

Ms. Susan Brown
Director
Physical Planning and Facilities Management
1250 Bellflower Boulevard, PH370
Long Beach, CA 90840-0127

RE: SCAG Clearinghouse No. I 20070387 Campus Master Plan

Dear Ms. Brown:

Thank you for submitting the **Campus Master Plan** for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

We have reviewed the **Campus Master Plan**, and have determined that the proposed Project is not regionally significant per SCAG Intergovernmental Review (IGR) Criteria and California Environmental Quality Act (CEQA) Guidelines (Section 15206). Therefore, the proposed Project does not warrant comments at this time. Should there be a change in the scope of the proposed Project, we would appreciate the opportunity to review and comment at that time.

A description of the proposed Project was published in SCAG's **June 16-30, 2007** Intergovernmental Review Clearinghouse Report for public review and comment.

The project title and SCAG Clearinghouse number should be used in all correspondence with SCAG concerning this Project. Correspondence should be sent to the attention of the Clearinghouse Coordinator. If you have any questions, please contact me at (213) 236-1856. Thank you.

Sincerely,

Lawrence Jones for

SHERYLL DEL ROSARIO
Associate Planner
Intergovernmental Review

Doc #137844

CITY OF LONG BEACH

DEPARTMENT OF PLANNING & BUILDING

333 W. Ocean Blvd, 7th Floor Long Beach, CA 90802 (562) 570-6357 FAX (562) 570 -6068

COMMUNITY & ENVIRONMENTAL PLANNING

July 20, 2007

Irena Finkelstein, AICP
HDR Engineering, Inc.
801 South Grand Avenue, Suite 500
Los Angeles, CA 90017

RE: 2007 Campus Master Plan Project at CSU Long Beach
Comments on Notice of Preparation

Dear Ms. Finkelstein:

The City of Long Beach has reviewed the Notice of Preparation (NOP) on the proposed 2007 Campus Master Plan project at CSU Long Beach and has the following comments to provide in accordance with Section 15082 of the California Environmental Quality Act (CEQA) Guidelines. We would like you to consider the comments in preparing the EIR.

Utilities/Service Systems

The NOP indicates that the Master Plan "may include the provision of water, sewer, and/or drainage structure improvements." Please identify storm water runoff and measures to reduce or eliminate runoff emanating from the site.

Additionally, the Long Beach Water Department has informed staff that the proposed 2007 Campus Master Plan update may require a Water Supply Assessment, per SB 221 and SB 610. If a Water Supply Assessment is required, the lead agency must request the assessment from the local public water supplier (the Long Beach Water Department, in this case). Please contact Matthew Lyons, Director of Planning & Conservation, at (562) 570-2315 for more information.

Transportation/Traffic

The NOP indicates that a traffic study will be prepared as part of the EIR. In said traffic study, staff encourages an assessment that includes, at minimum, the following intersections:

- Bellflower Blvd / Stearns St
- Pacific Coast Hwy / 2nd St
- Palo Verde Ave / Anaheim St
- Palo Verde Ave / Stearns St
- 7th St / W. Campus Dr
- Bellflower Blvd / Atherton Rd
- Pacific Coast Hwy / 7th St / Bellflower Blvd
- Palo Verde Ave / Atherton Rd
- Studebaker Rd / Anaheim St on-off ramp
- Bellflower Blvd / Beach Dr

- 7th St / E. Campus Dr
- Studebaker Rd / Atherton Rd
- Studebaker Rd / 7th St e/bound on-off ramp
- Bellflower Blvd / Woodruff Ave
- Studebaker Rd / 7th St w/bound on-off ramp

In addition, an analysis of potential new parking impacts (associated with the proposed on-campus parking additions) is recommended. The access routes to new parking facilities should be identified and their impacts on roadways abutting the campus should be addressed.

Noise

It has been brought to our attention by nearby residents that the proposed soccer facility may result in potentially significant noise impacts. We would like to see a full analysis of these impacts in the EIR.

All questions regarding this environmental review process should be directed to either Angela Reynolds, Planning Officer, at (562) 570-6357 or Craig Chalfant, Environmental Planner, at (562) 570-6368.

Sincerely,

Angela Reynolds
Planning Officer

From: Physical Planning and Facilities Management [ppfm@csulb.edu]
Sent: Tuesday, July 17, 2007 11:00 AM
To: Julie Jackson
Cc: Finkelstein, Irena
Subject: Re: CSULB Expansion

Julie,

Thank you for your comments. They have been forwarded to the campus' environmental consultant who will address them in the Draft Environmental Impact Report.

Sincerely,

Susan Brown
Director, Physical Planning

On Mon, 16 Jul 2007 12:14:20 -0700
"Julie Jackson" <jflyjack@charter.net> wrote:
> Janice - Thanks for passing this information on.
>
> Susan - Thanks for sharing this information with the residents of
> University Park Estates. Can you provide a Master Plan
>Legend
> (including timing of projects) for the Preliminary Conceptual Master
>Plan?
>
> Thank You.
>
> Regards,
>
> Julie Jackson
> Castle Financial, Inc - Reverse Mortgage Experts 3780 Kilroy Airport
>Way, Suite 200 Long Beach, CA 90806
> 888-488-4278 Toll Free
> 562-715-7902 Mobile
> <mailto:JulieJackson@CastleReverse.com>
>JulieJackson@CastleReverse.com
> www.CastleReverse.com <http://www.castlereverse.com/>
>
>For your protection, we remind you that this is an unsecure email
>service, which is not intended for sending confidential or sensitive
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>other personal information in the content of the email.
>
> Castle Financial is an Equal Housing Lender. CA Dept of Real Estate -
>Real Estate Broker 01511069
>
> -----Original Message-----
>From: U2RADahl@aol.com [mailto:U2RADahl@aol.com]
> Sent: Monday, July 16, 2007 8:56 AM
> To: undisclosed-recipients:
> Subject: CSULB Expansion
>
>
> CSULB is updating its physical master plan to be completed by the
> 2015/2016 academic year. The plan states that there will significant
>traffic congestion impacts from the construction.
> UPENA, through our

> Board, will need representation to mitigate the negative impacts on
>the our neighborhood. We, you, have until July 23, 2007 to submit in
>writing comments to:
>
>
> Thank you,
> Janice Dahl, President
> University Park Estates Neighborhood Association
>
>
>
>
> _____
>
> Get a sneak peak of the all-new AOL.com
> <http://discover.aol.com/memed/aolcom30tour/?ncid=AOLAOF00020000000982
> >
> .
>

From: Physical Planning and Facilities Management [ppfm@csulb.edu]
Sent: Tuesday, July 17, 2007 10:59 AM
To: Gary_DeLong@longbeach.gov
Cc: Finkelstein, Irena
Subject: Re: CSULB Master Plan

Gary, I received a call from Janice Dahl yesterday morning representing University Park Estates. I understand she had a meeting last night at the Gas Lamp during which she planned to discuss our Master Plan Update. I told her we welcome comment letters from her constituency group during the IS/NOP period as well as during the DEIR period.

Our master plan environmental consultant, HDR Engineering, Inc., has hired Fehr & Peers (Kaku) Traffic Consultants to assess traffic impacts. Their findings and mitigations measures will be addressed in the DEIR. I understand that the traffic consultant will also be in contact with the City's traffic engineer on this issue.

Please feel free to contact me if you have additional questions or need further information.

Thank you,

Susan Brown
Director, Physical Planning

On Tue, 17 Jul 2007 06:53:49 -0700
Gary_DeLong@longbeach.gov wrote:
> Susan, The University Park Estates Neighborhood Association may be
>providing comments. You may want to reach out to them, if you haven't
>already. Also, can you tell me where and how much additional traffic
>may be created and what the mitigation measures would be?
> Gary DeLong
> Councilmember, 3rd District
> City of Long Beach
> 562/961-4105
> 562/961-4106 (Fax)
> www.LongBeach.Gov/District3

From: Physical Planning and Facilities Management [ppfm@csulb.edu]
Sent: Friday, July 20, 2007 8:48 AM
To: KEITH NOTTAGE
Cc: Finkelstein, Irena
Subject: Re: June 2007 Master Plan Proposal

Dear Mr. Nottage,

Thank you for your comments on our master plan proposal.
These will be shared with the environmental consultant and addressed in the Draft Environmental Impact Report (DEIR). The DEIR will be circulated for public review and
comments in the coming months. We appreciate your
feedback.

Sincerely,

Susan Brown
Director, Physical Planning

On Thu, 19 Jul 2007 18:27:31 -0700
"KEITH NOTTAGE" <knottage@charter.net> wrote:
> Attention:
>
> Ms. Susan Brown, Director, Fhysical Planning
>
> RE: June 2007 Proposed Additions to Campus
>
> Attached are comments for your consideration concerning the Proposed
>June 2007 Master Plan.
>
> Thank you for your consideration.
>
> Keith Nottage

KEITH S. NOTTAGE
6232 VISTA STREET, LONG BEACH CA 90803
TEL: (562) 596-8807 E-MAIL: KNOTTAGE@CHARTER.NET

July 19, 2007

Susan Brown, Director, Physical Planning
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflower Blvd., BH 370
Long Beach, CA 90840-0127

Fax: (562) 985-7647
Email: ppfm@csulb.edu

Dear Ms Brown;

I just completed a review of the "Notice of Preparation of Environmental Impact Report for California State University Long Beach Campus Master Plan." I was recently aware of the plan being out for public comment.

I will keep my comments and the contradictions, or avoidance, in the report to reality as brief as possible. I have lived in the area for over 38 years and have followed the growth of the Campus with great support and approval, but the report appears to have blinders in certain areas.

The major problem I see in the proposed expansion is the parking facility proposed for the corner of Campus Drive and 7th Street, where the name of Campus Street changes to Margo St. Seventh Street is currently listed by the State of California, the County of Los Angeles and the City of Long Beach as a major impacted and overloaded section of 7th Street. The entire length of 7th Street, from Bellflower to the 22nd and 605 off ramps is tightly impacted most of the day into the late evening hours.

The master plan proposed by HDR Engineering proposes pushing a minimum of 7,000 more vehicles and their omissions into the atmosphere in that intersection.

A great deal of the report worries about reptilian and ancient bone disturbance, but not one word about a K thru 5th grade school, at capacity, less than half a mile from this intersection. They seem to feel there will not be any emissions from the 7,000 vehicles that could impact on living students and teachers at that school. Also within a few hundred feel of that intersection are a large number of homes with living small children playing. No reference is made in the Master Plan to this affected population. There is presently more than sufficient space to build the parking garages proposed on the flat parking area along PaloVerde Drive, next to the recently opened structure.

To me Page 23 is the cop out of the traffic issues facing the expansion, when there are presently several major issues are being side stepped by saying the traffic issue will be addressed as part of a EIR traffic study. There are currently three "independent" traffic studies presented to the Long Beach Planning Department

concerning proposed developments on the fringe of the campus and none of the three agree on the traffic impacts. All projects ignore the overall traffic effects of all activities in the area from Studebaker Rd, 2nd Street, Pacific Coast Highway, and 7th Street.

I would like to see the University address communications with the citizens, school district people representing schools like Mini Gant, Hill Middle School and Kettering Elementary, and business's impacted.

Thank you for the opportunity to comment.

Respectfully,

Keith S. Nottage

RECEIVED

JUL 25 2007

PHYSICAL PLANNING AND
FACILITIES MANAGEMENT

July 23, 2007

Susan Brown, Director, Physical Planning
California State University, Long Beach
Physical Planning and Facilities Management
1250 Bellflower Boulevard, BH 370
Long Beach, CA 90840-0127

Dear Ms. Brown,

Thank you for the invitation to comment on the Initial Study of the Campus Master Plan. As a representative of the Atherton Ditch Adjacent Neighborhood Association, my review of the study is confined to the interest areas of our organization. These areas include the Atherton ditch and related storm water, neighborhood parking/traffic and general aesthetics along Atherton and Palo Verde.

Within this context, I do question one specific conclusion of the Initial Study: Page 24, XVI. Utilities and Service Systems, Item C: "Require or result in the construction of new storm water drainage facilities, the construction of which would cause significant environmental effects?" The "Less Than Significant Impact" box is checked. I believe there are currently storm water drainage issues along Atherton Street. I have enclosed a photograph of the intersection of Atherton and Palo Verde taken on 2/21/05 as evidence of the current condition. Increased traffic, parking and building new structures on lower campus will certainly impact the existing conditions.

Again, thank you for the opportunity to comment. I would be more that happy to provide input in the future. Also, if you intend to conduct any community meetings or study sessions, please include me as an attendee or presenter.

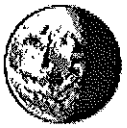
Best regards,

Daryl Supernaw

Daryl Supernaw
Atherton Ditch Adjacent Neighborhood Association
1816 Hackett Avenue
Long Beach, CA 90815

Enclosure


Pizzaria



Carl Lipo <clipo@csulb.edu>
07/25/2007 03:50 PM

To SCHARMAC@CSULB.EDU
cc
bcc
Subject Master Plan Question

Hi Scott,

I saw that the initial study for the master plan is now posted online. Looking through it I didnt see any discussion about better access to campus for bicycles - while this might seem like a minor issue, increasing number of students, staff and faculty are living around Long Beach and bike to work. The City of Long Beach is including a new bike plan in their Master Plan - right now the situation with biking to campus is pretty ridiculous - both getting onto campus and then navigating through it.

Is there going to be any consideration for bikes in future versions? Who looks at this issue?

Carl

Carl P. Lipo
Director, CSULB Archaeology Program
Associate Professor
Archaeology and IIRMES
California State University Long Beach
1250 Bellflower Blvd.
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http://www.csulb.edu/programs/archy/
Blog: http://www.evolutionbeach.org
Email: clipo@csulb.edu

Appendix B
Traffic Study

TRAFFIC IMPACT STUDY
FOR THE
CALIFORNIA STATE UNIVERSITY LONG BEACH
MASTER PLAN

LONG BEACH, CALIFORNIA

OCTOBER 2007

PREPARED FOR
HDR Engineering, Inc.

PREPARED BY

TRAFFIC IMPACT STUDY
FOR THE
CALIFORNIA STATE UNIVERSITY, LONG BEACH
MASTER PLAN

LONG BEACH, CALIFORNIA

October 2007

Prepared for:

HDR ENGINEERING, INC.

Prepared by:

FEHR & PEERS/KAKU ASSOCIATES
201 Santa Monica Boulevard, Suite 500
Santa Monica, California 90401
(310) 458-9916

Ref: 2133

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I. INTRODUCTION

This report documents the results of the traffic impact analysis for the proposed California State University, Long Beach (CSU Long Beach) Master Plan in the City of Long Beach. This report identifies the base assumptions, describes the methods used to analyze traffic operations, and summarizes the findings of the analysis.

PROJECT DESCRIPTION

CSU Long Beach currently has the following uses, according to data provided from the campus planning department for the 2006-2007 academic year:

- 26,440 full-time equivalent (FTE) students (total head-count = 35,574)
- 1,116 full-time faculty and 1,034 part-time faculty
- 1,407 full-time staff and 130 part-time staff
- 1,962 beds of on-campus student housing
- Parking:
    - Surface Lots = 8,961 spaces
    - Temporary Lot (20) = 419 spaces
    - Parking Structure #1 = 2,727 spaces
    - Parking Structure #2 = 1,297 spaces
    - Total = 13,404 spaces

The CSU Long Beach Master Plan has a horizon year of 2020. To determine potential impacts of campus growth under near-term conditions, specific projects expected to occur by Year 2012-13 along with an increase in student enrollment were identified. The following campus growth was assumed to occur under near-term conditions (by 2012-13).

- 27,479 FTE students
- Liberal Arts Replacement Buildings (no new students)
- Soccer Complex (no new students)
- 980 beds for student housing, Phase 1
- Parking Structure #3 – 1,300 total spaces located on Lot 11

With the implementation of the proposed Master Plan, the following uses (in addition to those identified above for near-term conditions) are planned for CSU Long Beach under Year 2020 conditions:

- 31,000 FTE students
- 1,034 beds for student housing, Phase 2
- Parking Structure #4 – 1,150 total spaces located on Lot 14A
- Parking Structure #5 – 1,360 total spaces located on Lot 7

STUDY SCOPE

This study analyzes potential project-generated traffic impacts on the adjacent street system within the City of Long Beach. Traffic impacts are based on the operating conditions of intersections in the study area. The 29 intersections selected for analysis are listed below and illustrated in Figure 1. The study intersections were selected based on locations most likely to be impacted by proposed campus growth and reflect comments received by the City of Long Beach from the Notice of Preparation prepared for the CSU Long Beach Master Plan.

1. Palo Verde Avenue & Anaheim Road/State University Drive
2. I-405 Southbound Off-Ramp & Los Coyotes Diagonal
3. Bellflower Boulevard & I-405 Northbound Ramps
4. Bellflower Boulevard & Sterns Street
5. Bellflower Boulevard & Atherton Street
6. Bellflower Boulevard & Beach Drive
7. Bellflower Boulevard & 7th Street
8. Bellflower Boulevard & Pacific Coast Highway
9. Pacific Coast Highway & 7th Street
10. West Campus Road & 7th Street
11. Palo Verde Avenue & Parking Structure
12. Palo Verde Avenue & Rendina Street
13. Palo Verde Avenue & Atherton Street
14. Palo Verde Avenue & Sterns Street
15. Palo Verde Avenue & Woodruff Avenue
16. Palo Verde Avenue & I-405 Northbound Ramps
17. Merriam Way & Fanwood Drive & Atherton Street
18. Earl Warren Drive & Atherton Street
19. Studebaker Road & SR-22 Westbound Ramps
20. Studebaker Road & Atherton Street
21. Studebaker Road & I-405 Southbound Off-Ramp
22. Studebaker Road & I-405 Northbound On-Ramp
23. Studebaker Road & Anaheim Road
24. Earl Warren Drive & Beach Drive

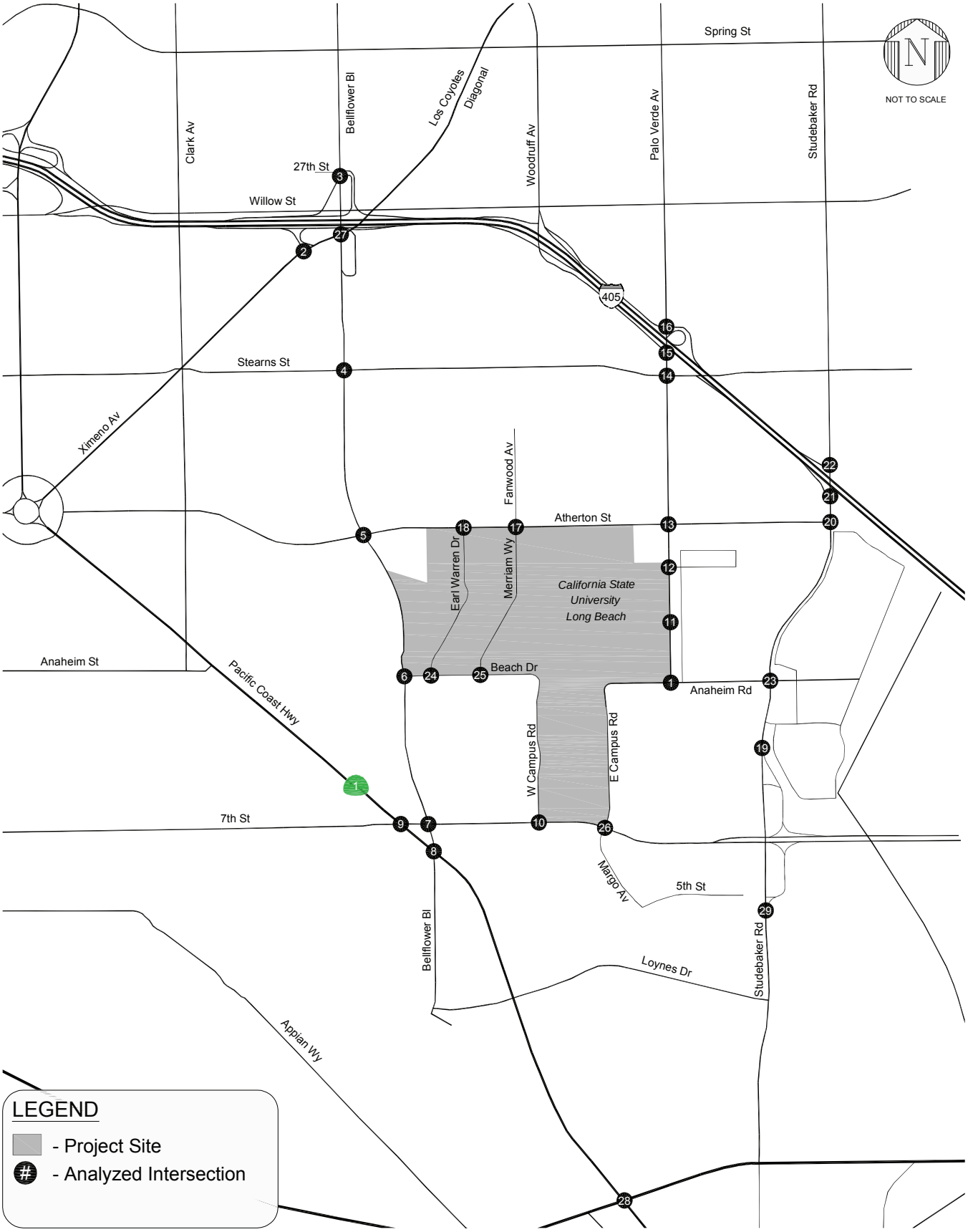


FIGURE 1
PROJECT SITE AND STUDY INTERSECTIONS

25. Merriam Way & Beach Drive
26. East Campus Road & 7th Street
27. Bellflower Boulevard & Los Coyotes Diagonal
28. Pacific Coast Highway & 2nd Street
29. Studebaker Road & SR-22 Eastbound Ramps

The impact analyses of near-term and future year traffic conditions were based on projected conditions in Year 2012-13 and 2020 both with and without the implementation of the proposed Master Plan. The following traffic scenarios were developed and analyzed as part of this study:

- Existing (2007) Conditions – The analysis of existing traffic conditions was intended to provide a basis for the remainder of the study. The existing conditions analysis included a description of the street system serving the site, current traffic volumes, and an assessment of the operating conditions at the study intersection.

- Near-Term (2012-13) Base Conditions – Near-term conditions without the proposed project traffic were developed for the year 2012-13. The objective of this analysis was to project near-term traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site by the academic year 2012-13.

- Near-Term (2012-13) plus Project Conditions – This scenario provided projected traffic volumes and an assessment of operating conditions under near-term conditions with the addition of project-generated traffic. Potential impacts of the proposed project on near-term traffic operating conditions were identified.

- Cumulative (2020) Base Conditions – Future conditions without the implementation of the Master Plan were developed for the Year 2020. The objective of this analysis was to project future traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site under Master Plan buildout (2020) conditions.

- Cumulative (2020) plus Project Conditions – This scenario provided projected traffic volumes under Master Plan buildout conditions and an assessment of operating conditions with the addition of project-generated traffic. Potential impacts of the proposed project on future traffic operating conditions and mitigation measures were identified.

This study also analyzed potential project impacts on the Congestion Management Program (CMP) intersections and freeway segments in accordance with requirements of *2004 Congestion Management Program for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, 2004).

ORGANIZATION OF REPORT

This report is divided into six chapters, including this introductory chapter. Chapter II describes the existing circulation system and traffic conditions in the study area. Chapter III describes the methodologies used to forecast near-term traffic volumes and analyzes traffic impacts under near-term conditions. Chapter IV presents an assessment of potential traffic impacts under Master Plan buildout conditions with the anticipated traffic generated by campus growth. Chapter V contains the results of the CMP regional transportation system impact analysis for the project. Chapter VI discussed parking and internal circulation on campus under Master Plan buildout conditions. Appendices to this report include details of the technical analysis. Diagrams of the existing lane configurations at each of the study intersections are provided in Appendix A. Appendices B and C will be provided in the final draft of this report.

II. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions in the vicinity of CSU Long Beach. The assessment of conditions relevant to this study includes an inventory of the street system, traffic volumes on these facilities, and operating conditions at key intersections.

EXISTING STREET SYSTEM

CSU Long Beach is bordered by Atherton Street to the north, Palo Verde Avenue to the east, 7th Street to the south and Bellflower Boulevard to the west. Regional access to CSU Long Beach is provided by I-405 with full access interchanges at Bellflower Boulevard and Palo Verde Avenue and by SR-22 with access provided at Studebaker Road. The roadway system in the vicinity of CSU Long Beach is described below:

- Bellflower Boulevard – Bellflower Boulevard is a north-south arterial providing access to I-405 to the north and the Pacific Coast Highway to the south. Bellflower Boulevard has six travel lanes with limited on-street parking near CSU Long Beach.

- Palo Verde Avenue – Palo Verde Avenue is a north-south arterial providing access to I-405 to the north. It provides four travel lanes with on-street parking near the University. South of Atherton Street, Palo Verde provides access to CSU Long Beach parking structure #2, which has approximately 1,300 parking spaces in the north campus.

- Studebaker Road – Studebaker Road is a north-south arterial providing access to I-405 to the north with a partial interchange serving vehicles traveling to/from the north on I-405 and providing access to SR-22 to the south. Studebaker Road has four travel lanes in the vicinity of CSU Long Beach with limited on-street parking.

- Atherton Street – Atherton Street is an east-west roadway and serves as the University's northern border providing access to the north campus. Atherton Street has four travel lanes with limited on-street parking near CSU Long Beach.

- 7th Street – 7th Street is an east-west roadway and serves as the University's southern border, providing access to the south campus. 7th Street has six travel lanes with no on-street parking. East of CSU Long Beach, 7th Street becomes SR-22 and provides regional access to the east and I-405.

- Merriam Way – Merriam Way is a north-south roadway providing internal access within CSU Long Beach. Between Atherton Street and Parking Structure #1, Merriam Way has four lanes and then narrows to two lanes south of the parking structure. North of Atherton Street, Merriam Way becomes Fanwood Avenue and provides access to the residential neighborhood north of the University.

- Earl Warren Drive – Earl Warren Drive is a two- to four-lane north-south roadway providing internal access within CSU Long Beach and to the surface parking lots in the north campus.

- Beach Drive – Beach Drive is a four-lane east-west roadway providing internal access within CSU Long Beach. A primary campus gateway is at the Beach Drive and Bellflower Boulevard intersection at the western edge of campus. Beach Drive curves to the south and becomes West Campus Road.

- West Campus Road – West Campus Road is a two-lane north-south roadway providing internal access within CSU Long Beach. A primary campus gateway is at the West Campus Drive and 7th Street intersection at the southern edge of campus.

- East Campus Road – East Campus Road is a two-lane north-south roadway providing internal access within CSU Long Beach. East Campus Road is restricted to campus vehicles north of the surface parking lot adjacent to 7th Street.

- State University Drive – State University Drive is a two-lane east-west roadway providing access to the pick-up/drop-off area west of Palo Verde Avenue. East of Palo Verde Avenue, State University Drive becomes Anaheim Road, which provides access to Studebaker Road and areas further east.

Table 1 provides a description of each of these facilities and summarizes the physical characteristics of key streets in the study area. Diagrams of the existing lane configurations at each of the study intersections are provided in Appendix A.

EXISTING TRAFFIC VOLUMES AND LEVEL OF SERVICE

This section presents the existing intersection peak hour traffic volumes, a description of the methodology used to analyze the intersection traffic operations, and the resulting level of service (LOS) at each of the study intersections.

TABLE 1
EXISTING SURFACE STREET CHARACTERISTICS

SEGMENT	FROM	TO	LANE		BIKE LANE		MEDIAN	PARKING RESTRICTIONS		SPEED	STREET SWEEPING		ROAD
			NB/EB	SB/WB	NB/EB	SB/WB	TYPE	NB/EB	SB/WB	LIMIT	NB/EB	SB/WB	TYPE
Bellflower Bl	Wardlow	Spring	2	2	y	y	RM	NP 2-6 A	NP 2-6 A	40	4A-8A Th	4A-8A F	
	Spring	29th St	3	3	y	y	RM	NP 2-6 A	NP 2-6 A	40	4A-8A Th	4A-8A F	
	29th St	Los Coyotes Diag	3	3	y	y	RM	NSAT	NSAT	40			
	Los Coyotes Diag	23rd St	3	3	y	y	RM	NSAT	NSAT	35			
	23rd St	Stearns St	3	3	y	n	RM	NSAT	NSAT	35			
	Stearns St	Britton Dr/Abbeyfield St	3	3	y	y	RM	2 Hr 9A-6P, NP 2-6A	2 Hr 9A-6P, NP 2-6A	35			
	Britton Dr/Abbeyfield St	Garford St	3	3	n	y	RM	NP 2-6 A	NP 2-6 A	35			
	Garford St	Atherton St	3	3	n	n	RM	NSAT	NSAT	35			
	Atherton St	Beach Dr	3	3	n	n	DY	NSAT	NSAT	40			
	Beach Dr	Anaheim Rd	3	3	n	n	DY	PA	NSAT	40	4-8A F		
	Anaheim Rd	7th St	3	3	n	n	DY	PA	PA	40	10A-12P F	10A-12P Th	
	7th St	Pacific Coast Hwy	3	3	n	n	RM	NSAT	NSAT	40			
	Pacific Coast Hwy	Colorado St	3	3	n	n	RM	PA	PA	35	4A-8A F	4A-8A Th	
	Colorado St	1st St	2	2	n	n	RM	NSAT	NSAT	35			
Pacific Coast Hwy	1st St	Studebaker Rd	2	2	y	y	DY	NSAT	NSAT				
	Studebaker Rd	2nd St	3	2	n	n	DY	NSAT	NSAT	50			
	2nd St	bridge	2	3	n	n	DY	NSAT	NSAT	50			
	bridge	Loynes Dr	2	3	n	n	2LT	NSAT	NSAT	50			
	Loynes Dr	Channel Dr	3	3	n	n	DY	NSAT	NSAT	50			
	Channel Dr	7th St	3	3	n	n	RM	NSAT	NSAT	45			
	7th St	Anaheim St	2	2	n	n	2LT	NSAT	NSAT	45	4A-8A Th	7A-8A F	
	Anaheim St	Clark Av	3	3	n	n	RM	NSAT	NSAT	45			
	Clark Av	Ximeno	2	2	n	n	DY	PA	PA	45	4-8A F	4A-8A Th	
	Ximeno	Traffic Circle	2	2	n	n	DY	PA	NSAT	35			
Los Coyotes Diag	Traffic Circle	Clark Av/Stearns St	3	3	n	n	RM	NSAT	NSAT	40			
	Clark Av/Stearns St	Willow St	3	3	n	n	RM	NSAT	NSAT	40			
	Willow St	Deborah St	2	2	n	n	2LT	PA	PA	40			
	Deborah St	Spring St	2	2	n	n	DY	PA	PA	40			
Studebaker Rd	Spring St	Stearns St	2	2	y	y	RM	PA	PA	40	4A-8A F	4A-8A Th	
	Stearns St	Anaheim Rd	2	2	y	y	RM	NSAT	NSAT	40			
	Anaheim Rd	past 9th St	2	2			2LT	PA	PA	45			
	past 9th St		2	2			DY	NSAT	NSAT	45			
7th St	Studebaker Rd	E Campus Dr	3	3	n	n	RM	NSAT	NSAT	45			
	E Campus Dr	W Campus Dr	3	3	n	n	DY	NSAT	NSAT	40			
	W Campus Dr	Pacific Coast Hwy	3	3	y	y	DY	NSAT	NSAT	40			
	Pacific Coast Hwy	Santiago Av	3	2	n	n	DY	NSAT	NSAT	40			
	Santiago Av	Park Av	2	2	n	n	DY	NSAT	NSAT	40			
Clark Av	Pacific Coast Hwy	Atherton St	2	2			2LT	NSAT	NSAT	35			
	Atherton St	Stearns St	2	2			DY	NP 2-6 A*	NSAT	35	8A-12P Th		
Stearns St	Clark Av	Bellflower Bl	2	2			DY	PA	PA	35	4A-8A Th	4A-8A F	
	Bellflower Bl	mall driveway	2	2			RM	NSAT	NSAT	35			
	mall driveway	San Vicente Av	2	2			2LT	NSAT	NSAT	35			
	San Vicente Av	Palo Verde Av	2	2			DY	NSAT	NSAT	35			
	Palo Verde Av	405 Fwy	2	2			2LT	PA	PA	35			
	405 Fwy	Studebaker Rd	1	1			2LT	PA	PA	35	4A-8A Th	4A-8A F	
Atherton St	Studebaker Rd	Carfax Av	2	2			RM	PA	NSAT	40			
	Carfax Av	McNab Av	2	2			RM	NSAT	NSAT	40			
	McNab Av	Merriam Wy	2	2			RM	PA	PA	40	4A-8A F	4A-8A F	
	Merriam Wy	Lave Av	2	2			RM	NSAT	30 min. PA	40			
	Lave Av	Bellflower Bl	2	2			RM	PA	PA	40		4A-8A F	
	Bellflower Bl	Outer Circle	2	2			2LT	PA	PA	40		4A-8A F	
Merriam Wy	Atherton St	parking structure exit	2	2			RM	RZ	RZ	25			
	parking structure exit	past bridge	1	1			DY	RZ	RZ	25			
	past bridge	Beach Dr	1	1			DY	RZ	RZ	20			
[L] Beach [SU] Dr	Bellflower Bl	Merriam Wy	2	2			DY	RZ	RZ	25			
	Merriam Wy	W Campus Rd	2	2			DY	RZ	RZ	15			
W Campus Rd	Beach Dr	7th St	1	1			DY	RZ	RZ	20			
Earl Warren Dr	Beach Dr	past final NB curve	2	2			RM	RZ	RZ	25			
	past final NB curve	Atherton St	1	2			DY	NSAT	NSAT	25			
Fanwood Av	Atherton St	several blocks north	1	1			UD	2 Hr 9A-9P*	2 Hr 9A-9P*		12P-4P Th	12P-4P F	
Palo Verde Av	Anaheim St	Atherton St	2	2	y	y	2LT	PA	PA	35	4A-7A F	4A-7A F	
	Atherton St	Stearns St	2	2	y	y	2LT	PA	PA	35	4A-8A Th	4A-8A F	
	Stearns St	Woodruff Av	2	2	y	y	RM	PA	PA	35	4A-8A Th	4A-8A F	
	Woodruff Av	Willow St	2	2	y	y	DY	NSAT	PA	35	4A-8A Th	4A-8A F	

Notes:

MEDIAN TYPE: DY = Double Yellow Centerline
SDY = Single Dashed Yellow Centerline
2LT = Dual Left Turn Centerline
RM = Raised Median
UD = Undivided Lane

PARKING: PA = Parking Allowed
NSAT = No Stopping Anytime
GZ = Green zone - Passenger loading and unloading
RZ = Red zone - No parking allowed

LANES: # = Number of lanes

ROAD TYPE: H = Major Highway Class II
S = Secondary
C = Collector

* - Except with District Permit; I didn't notice these signs until the first time it's listed above, but it's possible that everywhere it said NS 2A-6A had a district permit exception

Existing Intersection Traffic Volumes

Weekday morning (7:00 – 9:00 a.m.) and afternoon (4:00 – 6:00 p.m.) peak travel period intersection turning movement counts were conducted at the majority of the study intersections on March 20-21, 2007. Existing traffic counts for the Studebaker Road & SR-22 ramp intersections and for the Palo Verde Avenue & Anaheim Road intersection were provided by the City of Long Beach.

For the operations analysis, the peak one-hour time period for the morning and afternoon was determined by identifying the four consecutive 15-minute periods with the highest traffic volumes. Figure 2 illustrates the existing traffic volumes for the a.m. and p.m. peak hours.

Level of Service Methodology

LOS is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the satisfactory LOS in urban areas. A description of the operating conditions under each LOS is included in Table 2 for signalized intersections and in Table 3 for stop-controlled intersections.

The "Intersection Capacity Utilization" method of intersection capacity analysis was used to determine the intersection volume-to-capacity (V/C) ratio and corresponding LOS for the 23 signalized study intersections.

At the remaining six study intersections, which are stop-controlled, the average vehicular delay was determined using the "Stop Control" method contained in *Highway Capacity Manual, Special Report 209* (Transportation Research Board, 2000). For all-way-stop-controlled intersections, the average delay for all vehicles traveling through the intersection is used to determine the LOS. For side-street stop-controlled intersections, the methodology calculates the average vehicle delay for each individual movement and the LOS is based on the reported worst-case movement at the intersection. For this study, both the worst-case and average LOS are reported for side-street stop-controlled intersections.

TABLE 2
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	>0.600 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat what restricted within groups of vehicles.
C	>0.700 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	>0.800 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	>0.900 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity,* Transportation Research Board, 1980.

TABLE 3
LEVEL OF SERVICE DEFINITIONS FOR
STOP-CONTROLLED INTERSECTIONS

Level of Service	Average Total Delay (seconds/vehicle)
A	$\leq$ 10.0
B	> 10.0 and $\leq$ 15.0
C	> 15.0 and $\leq$ 25.0
D	> 25.0 and $\leq$ 35.0
E	> 35.0 and $\leq$ 50.0
F	> 50.0

Source: *Highway Capacity Manual, Special Report 209,* Transportation Research Board, 2000.

Existing Levels of Service

The traffic volumes presented in Figure 2 were analyzed using the methodologies described above to determine the current operating conditions at the study intersections. At signalized intersections, the calculation is expressed in a V/C ratio for critical movements where the volumes at the intersection are compared to the actual capacity of the intersection. At unsignalized intersections, the calculation is expressed in delay in terms of seconds per vehicle for the worst-case movement and for the intersection as a whole.

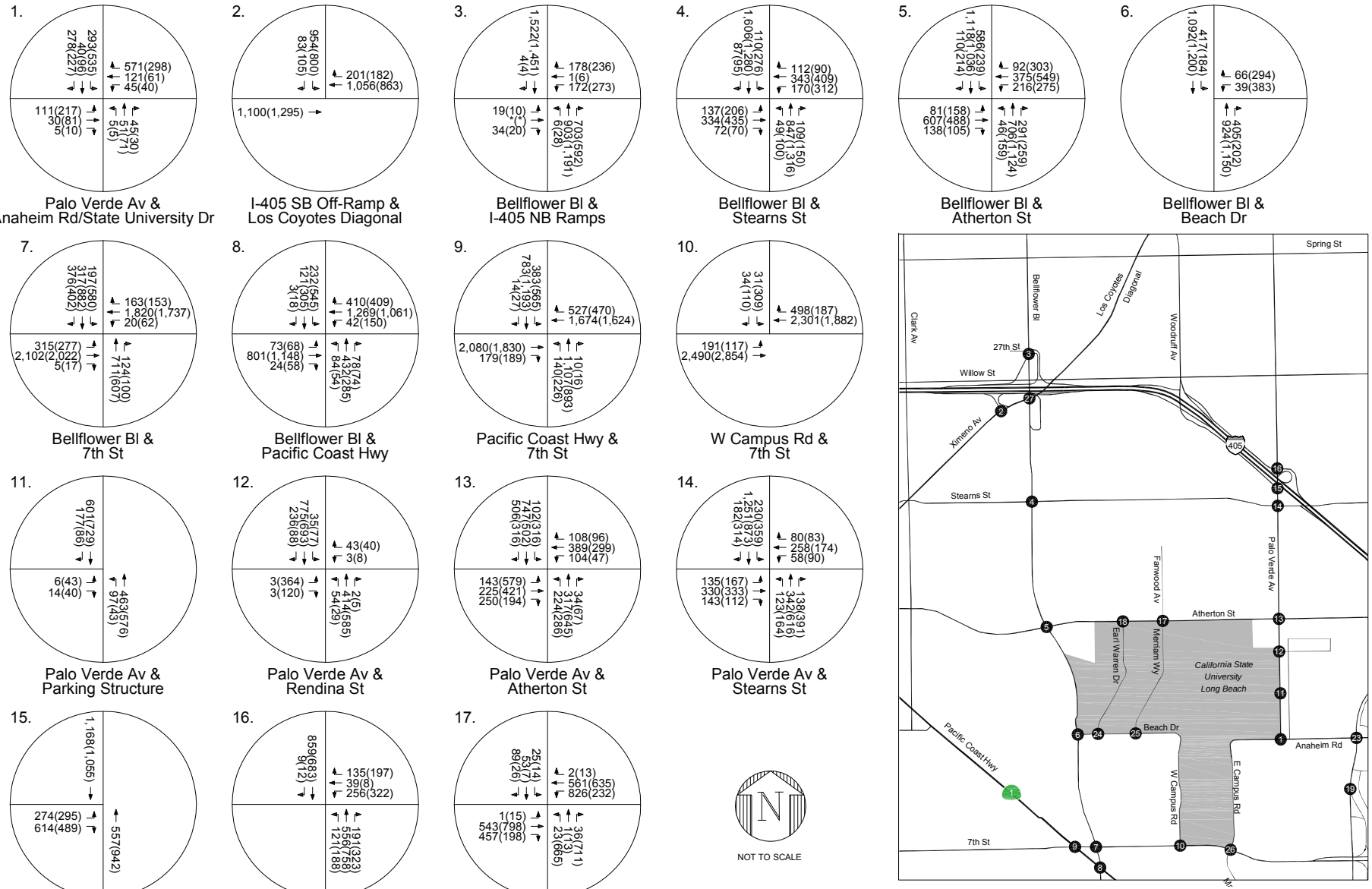
Table 4 summarizes the existing a.m. and p.m. peak hour traffic operations at each of the study intersections. Most of the study intersections operate at an acceptable LOS (LOS D or better) during both of the peak hours except for the following intersections:

- Bellflower Boulevard & 7th Street – LOS E during the a.m. and p.m. peak hours
- Pacific Coast Highway & 7th Street - LOS E during the a.m. peak hour and LOS F during the p.m. peak hour
- Pacific Coast Highway & 2nd Street – LOS E during the a.m. peak hour and LOS F during the p.m. peak hour

EXISTING TRANSIT SERVICE

Long Beach Transit provides citywide transit service in the vicinity of CSU Long Beach and within the campus along Beach Drive and West Campus Drive. Long Beach Transit routes serving the campus are:

- Route 81 – Route 81 runs in the east-west direction along 10th Street and 7th Street from downtown Long Beach to CSU Long Beach at 30-minute headways during peak hours.
- Routes 91, 92, 93, and 94 – Routes 91, 92, 93, and 94 run along 7th Street in the east-west direction and along Bellflower Boulevard in the north-south direction. These routes provide service from downtown Long Beach to Alondra Boulevard at 12-minute headways during peak hours.
- Routes 172, 173, and 174 – Routes 172, 173, and 174 run along the Pacific Coast Highway and Stearns Street in the east-west direction and along Palo Verde Avenue and Studebaker Road in the north-south direction. These routes provide service from downtown Long Beach to Norwalk Station at 30-minute headways during peak hours.



FEHR & PEERS
KAKU ASSOCIATES

FIGURE 2
EXISTING (YEAR 2007) PEAK HOUR TRAFFIC VOLUMES

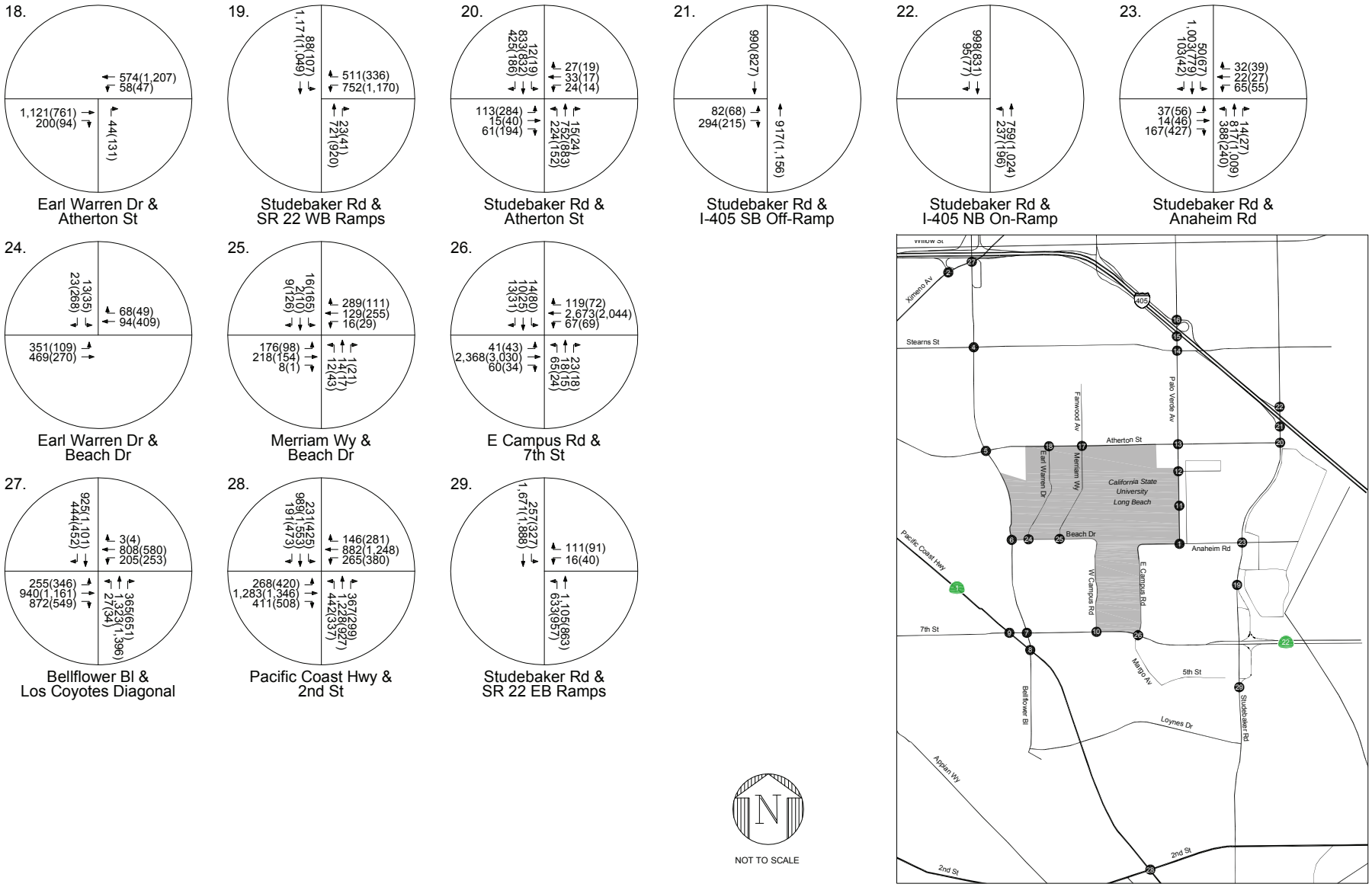


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FIGURE 2 (CONT.)
EXISTING (YEAR 2007) PEAK HOUR TRAFFIC VOLUMES

TABLE 4
INTERSECTION LEVEL OF SERVICE ANALYSIS
EXISTING (YEAR 2007) CONDITIONS

Intersections	Peak Hour	V/C or Average (Worst) Delay	LOS
1. Palo Verde Avenue & Anaheim Road	A.M. P.M.	27 17	D C
2. I-405 SB Off-Ramp & Los Coyotes Diagonal	A.M. P.M.	0.653 0.653	B B
3. Bellflower Boulevard & I-405 NB Ramps	A.M. P.M.	0.528 0.547	A A
4. Bellflower Boulevard & Stearns Street	A.M. P.M.	0.716 0.813	C D
5. Bellflower Boulevard & Atherton Street	A.M. P.M.	0.790 0.784	C C
6. Bellflower Boulevard & Beach Drive	A.M. P.M.	0.525 0.581	A A
7. Bellflower Boulevard & 7th Street	A.M. P.M.	0.920 0.975	E E
8. Bellflower Boulevard & Pacific Coast Highway	A.M. P.M.	0.618 0.704	B C
9. Pacific Coast Highway & 7th Street	A.M. P.M.	0.976 1.003	E F
10. West Campus Road & 7th Street	A.M. P.M.	0.822 0.826	D D
11. Palo Verde Avenue & Parking Structure [a]	A.M. P.M.	1 (22.4) 1 (27.8)	A (C) A (D)
12. Palo Verde Avenue & Rendina Street	A.M. P.M.	0.406 0.478	A A
13. Palo Verde Avenue & Atherton Street	A.M. P.M.	0.678 0.801	B D
14. Palo Verde Avenue & Stearns Street	A.M. P.M.	0.758 0.753	C C
15. Palo Verde Avenue & Woodruff Avenue	A.M. P.M.	0.849 0.735	D C

TABLE 4
INTERSECTION LEVEL OF SERVICE ANALYSIS
EXISTING (YEAR 2007) CONDITIONS

Intersections	Peak Hour	V/C or Average (Worst) Delay	LOS
16. Palo Verde Avenue & I-405 NB Off-Ramp	A.M. P.M.	0.607 0.636	B B
17. Merriam Way/Fanwood Drive & Atherton Street	A.M. P.M.	0.761 0.741	C C
18. Earl Warren Drive & Atherton Street [a]	A.M. P.M.	1 (13.3) 1 (12.3)	A (B) A (B)
19. Studebaker Road & SR-22 WB Ramps	A.M. P.M.	0.701 0.820	C C
20. Studebaker Road & Atherton Street	A.M. P.M.	0.595 0.643	A B
21. Studebaker Road & I-405 SB Off-Ramp [a]	A.M. P.M.	5 (72.6) 3 (57.6)	A (F) A (F)
22. Studebaker Road & I-405 NB On-Ramp	A.M. P.M.	0.560 0.482	A A
23. Studebaker Road & Anaheim Road	A.M. P.M.	0.753 0.676	B A
24. Earl Warren Dr & Beach Drive [a]	A.M. P.M.	3 (28.1) 4 (18.3)	A (D) A (C)
25. Merriam Way & Beach Drive [a]	A.M. P.M.	10 12	B B
26. East Campus Road & 7th Street	A.M. P.M.	0.782 0.860	C D
27. Bellflower Boulevard & Los Coyotes Diagonal	A.M. P.M.	0.786 0.853	C D
28. Pacific Coast Highway & 2nd Street	A.M. P.M.	0.927 1.029	E F
29. Studebaker Road & SR-22 EB Ramps	A.M. P.M.	0.692 0.747	A B

Notes:

[a] Intersection is controlled by stop signs. The top rows show analysis using *Highway Capacity Manual* stop-controlled methodology, for the purpose of evaluating the operating condition of the intersection. Average (worst case) intersection vehicular delay in seconds per vehicle is reported rather than V/C ratio.

- Passport D - Passport D runs mostly along Ocean Boulevard in the east-west direction. The route provides service from Catalina Landing in the west to CSU Long Beach and to Los Altos Market Center at 30-minute headways during peak hours.

CSU Long Beach provides shuttle service within campus with the Campus Connection. This shuttle service promotes alternative transportation within the campus and alleviates the need for students, faculty, or staff to drive within campus once they arrive and park their vehicle. The Campus Connection provides three shuttle routes to serve the major parking facilities and campus perimeter. The three shuttle routes are:

- Off-Campus West Shuttle – The Off-Campus West Shuttle provides service from the south campus to the north campus along the western campus roadways. The route begins at the 7th Street pick-up/drop-off area, continues north along West Campus Drive and west along Beach Drive, and then continues into the north campus on Earl Warren Drive, Merriam Way, and Atherton Street. Two shuttles are provided along this route with operation from 7:00 a.m. to midnight Monday through Thursday and from 7:00 a.m. to 5:00 p.m. on Fridays. The Off-Campus West Express also provides service between 7:30 a.m. and 3:00 p.m. Monday through Thursday.

- East Campus Shuttle – The East Campus Shuttle provides service from the south campus to the north campus along the eastern campus roadways. The route begins at the 7th Street pick-up/drop-off area, continues north along East Campus Drive and east along State University Drive, and then continues into the north campus on Palo Verde Avenue, Atherton Street, and Merriam Way. Two shuttles are provided along this route with operation from 7:00 a.m. to midnight Monday through Thursday and 7:00 a.m. to 5:00 p.m. on Fridays.

- On-Campus Tripper – The On-Campus Tripper provides a complete loop around the campus. The route begins at the 7th Street pick-up/drop-off area, continues north along West Campus Drive and west along Beach Drive, and then continues into the north campus on Earl Warren Drive, and uses existing surface lots and internal roadways to travel east to Palo Verde. The route then continues south on Palo Verde to State University Drive and then south on East Campus Drive. One shuttle is provided along this route with operation from 7:00 a.m. to 7:00 p.m. Monday through Thursday and 7:00 a.m. to 5:00 p.m. on Fridays.

III. NEAR-TERM TRAFFIC CONDITIONS

To evaluate the potential impact of CSU Long Beach growth under near-term conditions, traffic forecasts were developed to reflect Year 2012-13 conditions both with and without the proposed campus growth. Future traffic volumes without the project were first estimated, representing the near-term base conditions. The traffic generated by the proposed near-term growth was then estimated and separately assigned to the surrounding street system. The sum of the near-term base and project-generated traffic represents near-term plus project conditions.

NEAR-TERM BASE TRAFFIC PROJECTIONS

The near-term base traffic projections reflect growth in traffic from two primary sources: background or ambient growth in the existing traffic volumes to reflect the effects of overall regional growth both in and outside of the study area, and traffic generated by specific projects located within, or in the vicinity of, the study area. These factors are described below.

Areawide Traffic Growth

The near-term forecasts without the project reflect traffic increases due to general regional growth. Existing traffic volumes are expected to increase at a rate of 0.5% a year due to ambient growth based on projections from the Southern California Association of Governments' (SCAG) regional travel demand forecasting model. Therefore, 2007 traffic volumes were increased by 2.5% to reflect regional traffic growth between existing and Year 2012-13 conditions.

Related Project Growth

Near-term traffic forecasts also include the effects of specific projects, called related projects, expected to be implemented in the vicinity of CSU Long Beach within the next several years. The related projects were obtained from the planning departments of the Cities of Long Beach and Signal Hill. A total of 13 related projects were identified within a two-mile radius of CSU Long Beach and are illustrated in Figure 3.

The trip generation of the related projects was estimated based on rates published in *Trip Generation, 7th Edition* (Institute of Transportation Engineers [ITE], 2003). As shown in Table 5, the 13 related projects would generate a combined total of approximately 5,300 trips during the weekday morning peak hour and approximately 9,200 trips in the weekday evening peak hour. These projections are conservative (i.e., representing a worst-case scenario) in that they do not account for internalization of trips within the individual project site or non-motorized travel modes (transit, walk, etc.).

Based on the related project locations and their expected trip distribution, traffic generated by the related projects was assigned to the street network within the study area. The addition of ambient growth (2.5 percent) and related project trips to existing traffic volumes yields "near-term no project" a.m. and p.m. peak hour traffic forecasts at each study intersection.

NEAR-TERM PLUS PROJECT TRAFFIC PROJECTIONS

The development of traffic forecasts for the proposed near-term growth under the CSU Long Beach Master Plan was based on a three step process involving trip generation estimates, trip distribution, and trip assignment.

Proposed Near-Term Growth

As described in Chapter I, the CSU Long Beach Master Plan identifies near-term growth projections expected to occur by Year 2012-13. The following campus uses were assumed to occur under near-term conditions.

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FIGURE 3
LOCATIONS OF RELATED PROJECTS

TABLE 5
RELATED PROJECTS

	Description	Address	City	ITE Land Use Code	Land Use	Trips Per	Daily Trips	A.M. Trips			P.M. Trips		
								In	Out	Total	In	Out	Total
1.	106 Single Family Homes	2080 Obispo	Long Beach	268	106	DU	1,014	20	60	80	67	40	107
2.	175,000 sf commercial center (Home Depot)	400 Studebaker Rd	Long Beach	812	175	ksf	5,621	263	161	424	247	238	485
3.	Douglas Park Project - 349-lot subdivision, Planned Development Ordinance (PD-32), Design Guidelines, Development Agreement, for 1,400 units, 400-room hotel, 3.3 million sf of commercial/light industrial, and 11 acres of parkland	3855 Lakewood Blvd	Long Beach	230	1400	DU	8,204	105	511	616	488	240	728
				310	400	Room	3,268	137	87	224	125	111	236
				412	11	acre	25	4	2	6	2	4	6
4.	29-unit condominium development	4200 E. Anaheim St.	Long Beach	230	29	DU	170	2	11	13	10	5	15
5.	425 units, 170,000 sq. ft. of commercial space	6400 E. Pacific Coast Hwy	Long Beach	230	425	DU	2,491	32	155	187	148	73	221
				820	170	ksf	7,300	107	68	175	306	332	638
6.	Ralph's expansion 6,200 sq. ft.	2930 E. 4th Street	Long Beach	850	6.2	ksf	634	12	8	20	33	32	65
7.	34 attached townhomes	5116 Anaheim Rd.	Long Beach	230	34	DU	199	3	12	15	12	6	18
8.	Construction of 13 industrial bldgs @ Douglas park	2855 Lakewood Blvd	Long Beach	110	1650	ksf	11,501	1,336	182	1,518	194	1,423	1,617
9.	Construction of 13 commercial bldgs @ Douglas park	2856 Lakewood Blvd	Long Beach	820	1100	ksf	47,234	691	442	1,133	1,980	2,145	4,125
				710	550	ksf	6,056	751	102	853	139	681	820
10.	4,600 sf tenant improvement (GRG management)	1941 Freeman	Signal Hill	710	4.6	ksf	51	6	1	7	1	6	7
11.	4,000 sf tenant improvement wellness center	2652 Gundry	Signal Hill	630	4	ksf	145	8	2	10	4	11	15
12.	54-unit 3-story condos "Pacificwalk"	1801 Orizaba	Signal Hill	230	54	DU	316	4	20	24	19	9	28
13.	81 townhome/condo subdivision on Orizaba near PCH	1835 Orizaba	Signal Hill	230	81	DU	475	6	30	36	28	14	42
						Total	**94,704**	**3,487**	**1,854**	**5,341**	**3,803**	**5,370**	**9,173**

- 27,479 FTE students (1,039 new FTE students)
- Liberal Arts Replacement Buildings (no new students)
- Soccer Complex (no new students)
- 980 beds for student housing, Phase 1
- Parking Structure #3 – 1,300 total spaces located on Lot 11

Project Traffic Generation

Trip generation estimates for the proposed project were prepared using rates from *Trip Generation, 7th Edition* and from trip generation rates gathered at other universities for on-campus housing.

The number of new trips generated by growth in FTE students proposed in the CSU Long Beach Master Plan was based on ITE trip generation rates. ITE trip generation rates for universities are based on traffic count surveys collected at various universities throughout the country. The trip rates are reported on a "per FTE student" basis; however, they include all student, faculty, staff, and visitor trips to/from campus. The resulting trip generation based on ITE rates was reduced by 10 percent to reflect enhanced transit ridership on campus.

To account for the proposed on-campus student housing and the reduction in student commuter trips, students residing on campus were subtracted from the total number of new FTE students proposed under the Master Plan. Since the ITE trip generation rate also reflects trips by faculty/staff and visitors, however, taking a full ITE trip rate reduction for non-commuter students would underestimate the number of new trips generated by the proposed Master Plan. The new faculty/staff and visitor trips associated with student enrollment increases would not be included in the trip generation. Therefore, the ITE trip rates were assumed to comprise of 50 percent student trips and 50 percent faculty/staff and visitor trips. Non-commuter students were subtracted from the new FTE students based on 50 percent of the ITE trip generation rates.

To estimate the traffic generated by on-campus student housing, trip generation studies conducted for UC Santa Barbara, UC Davis, San Jose State University, Stanford, and Cal Poly Pomona were reviewed. ITE rates for typical multi-family housing complexes are not applicable to university student housing due to the differences in travel patterns between those residing in a typical apartment complex versus those residing on campus. Students residing on campus drive

less frequently during peak hours because they are already on campus and do not have to commute to school. On-campus student housing trips consist of work trips for students that work off-campus, shopping trips, visitor trips, and additional service and delivery trips needed to provide services to the housing complexes.

The trip rates and resulting daily and peak hour trip generation of the proposed near-term campus growth is shown in Table 6. As shown, the proposed project would generate approximately 3,300 daily trips, including approximately 165 trips during the a.m. peak hour and 250 trips during the p.m. peak hour. These trips reflect a 10 percent vehicle-trip reduction in commuter students to account for enhanced transit services at CSU Long Beach.

The existing trip generation of CSU Long Beach was compared to traffic counts collected at the campus gateways to ensure the trip generation rates and methodology applied to determine trip generation projections for campus growth were reasonable. The trip generation rates were found to produce traffic forecasts similar to existing campus traffic conditions during both the a.m. and p.m. peak hours.

Project Traffic Distribution

The distribution of vehicle-trips to/from CSU Long Beach was estimated based on the location of student, faculty, and staff residences. Zip code data was provided by campus staff to determine where students, faculty and staff currently reside. According to the zip code data provided, trips were distributed as follows:

- Approximately 35% of project trips would travel to/from the west on local roadways and on I-405
- Approximately 5% of project trips would travel to/from the south on local roadways within the City
- Approximately 30% of project trips would travel to/from the north on local roadway and on I-710 and I-605
- Approximately 30% of project trips would travel to/from the east primarily on SR-22 and I-405

TABLE 6
CSU LONG BEACH NEAR-TERM MASTER PLAN TRIP GENERATION ESTIMATES

Trip Generation Rates

Land Use	TRIP RATE CATEGORY [1]	Units	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Trip Rate	In	Out	Trip Rate
CSULB FTE Students	University/College	FTE Students	2.38	80%	20%	0.21	30%	70%	0.21
Commute Student Reduction	University/College	FTE Students	1.19	80%	20%	0.11	30%	70%	0.11
CSULB Student Housing	Student Beds	Beds	2.16	17%	83%	0.06	73%	27%	0.15

Near-Term Project Trips: Trip Generation Estimates for Incremental Increase between Existing and Near-Term Conditions

Land Use	ITE TRIP RATE CATEGORY	Size	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
CSULB FTE Students	University/College	1,039	2,473	175	44	219	65	154	219
Commute Student Reduction	University/College	-980	-1,166	-42	-61	-103	-15	-88	-103
CSULB Student Housing	Student Beds	980	2,117	10	49	59	107	40	147
10% Transit Reduction for Commuting Students & Faculty/Staff			-131	-13	0	-12	-5	-7	-12
		Total	**3,293**	**130**	**32**	**163**	**152**	**99**	**251**

Notes:

[1] Trip rates for FTE students based on *Trip Generation, 7th Edition*, Institute of Transportation Engineers (ITE), 2003.

The on-campus student reduction assumes that the ITE trip rates reflect 1/2 trips generated by students and 1/2 trips generated by faculty/staff and visitors.

Trip rates for on-campus student housing based on trip generation studies conducted for UC Santa Barbara, San Jose State University, Stanford, and Cal Poly Pomona.

ITE Trip generation rates are on a "per student" basis, but include all trips to campus such as students, faculty/staff, visitors and on-campus housing.

Using the estimated trip generation and the distribution pattern described above, the traffic generated by the proposed project was assigned to the street network within the study area. The majority of vehicles traveling to CSU Long Beach were assigned to the proposed parking structure (Structure #3) on Palo Verde Avenue south of Atherton Street and to the new student housing complex in the northwest quadrant of campus. The remaining vehicles were assigned to existing surface lots and parking structures on campus. Figure 4 displays the distribution of project trips.

Project Traffic Assignment

Vehicle trips generated by the project were added to near-term base traffic volumes based on the expected distribution of trips to yield "near-term plus project" a.m. and p.m. peak hour traffic volumes at the study intersections. Figure 5 displays the "project only" trips generated by the proposed near-term campus growth under Year 2012-13 conditions.

NEAR-TERM TRAFFIC PROJECTIONS

Figure 6 illustrates the near-term base traffic forecasts for the study intersections during the a.m. and p.m. peak hours. The proposed near-term project traffic volumes (shown in Figure 5) were added to the near-term base traffic projections. The resulting projected traffic volumes of the near-term base plus proposed project conditions for the weekday a.m. and p.m. peak hours are illustrated in Figure 7.

NEAR-TERM TRAFFIC IMPACT ANALYSIS

The traffic impact analysis compares the projected LOS at each study intersection under the near-term base and near-term plus project conditions to determine the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significance criteria established by the City of Long Beach.

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FIGURE 4
PROJECT TRIP DISTRIBUTION

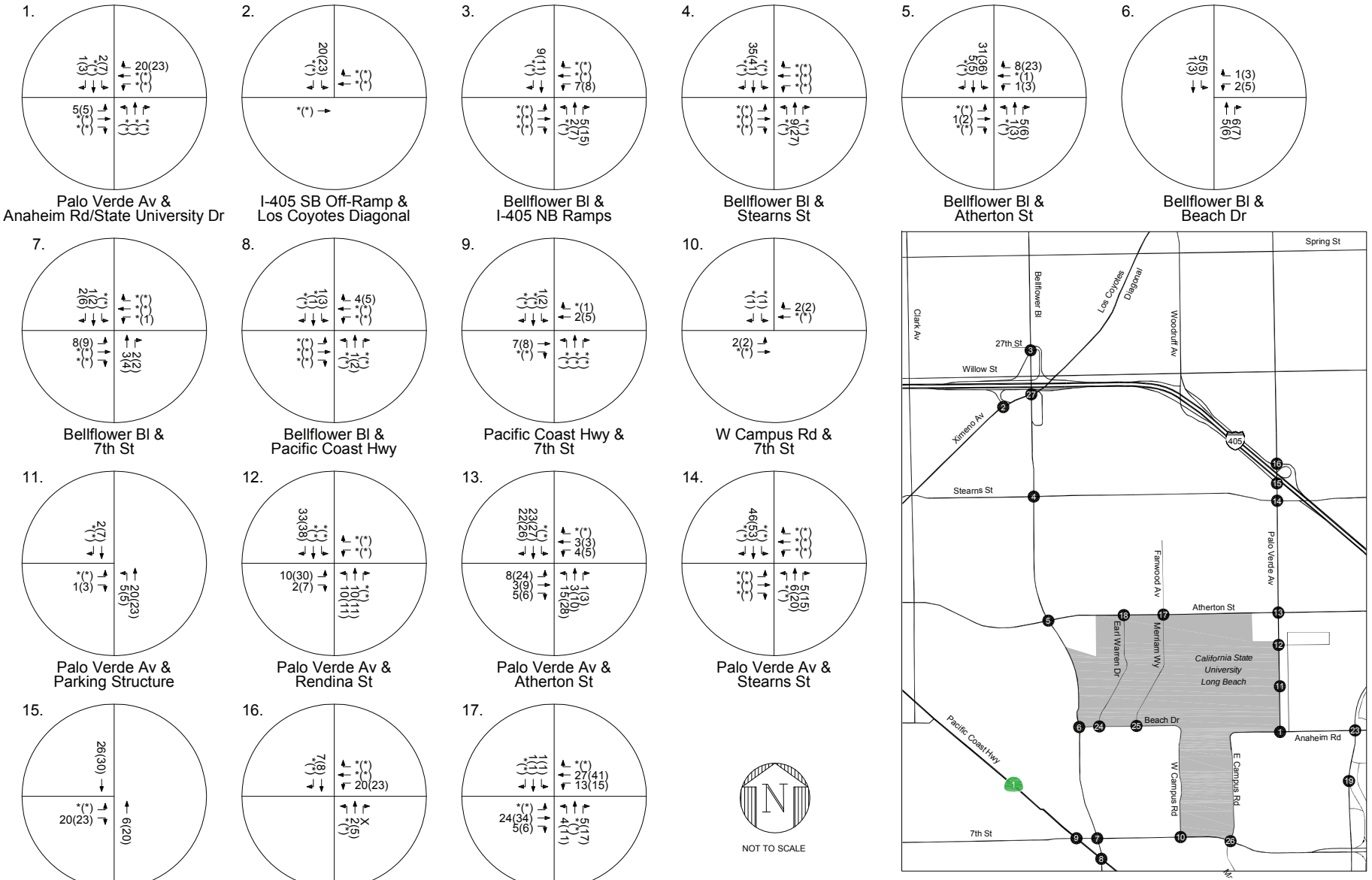

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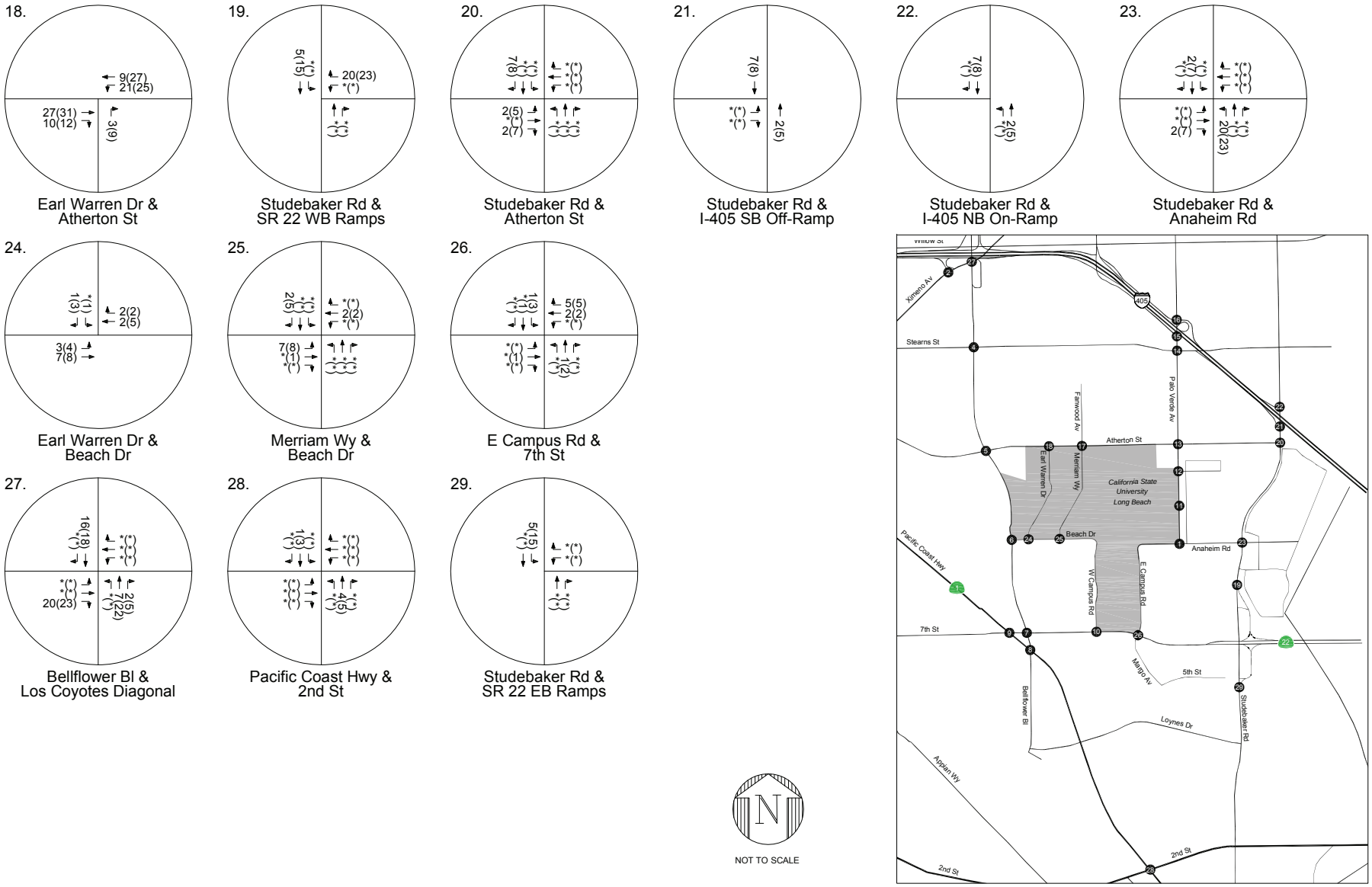
FIGURE 5
PROJECT ONLY (YEAR 2012) PEAK HOUR TRAFFIC VOLUMES



LEGEND

#(#) - A.M.(P.M.) Peak Hour Traffic Volume

* - Negligible Volumes

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FIGURE 5 (CONT.)
PROJECT ONLY (YEAR 2012) PEAK HOUR TRAFFIC VOLUMES

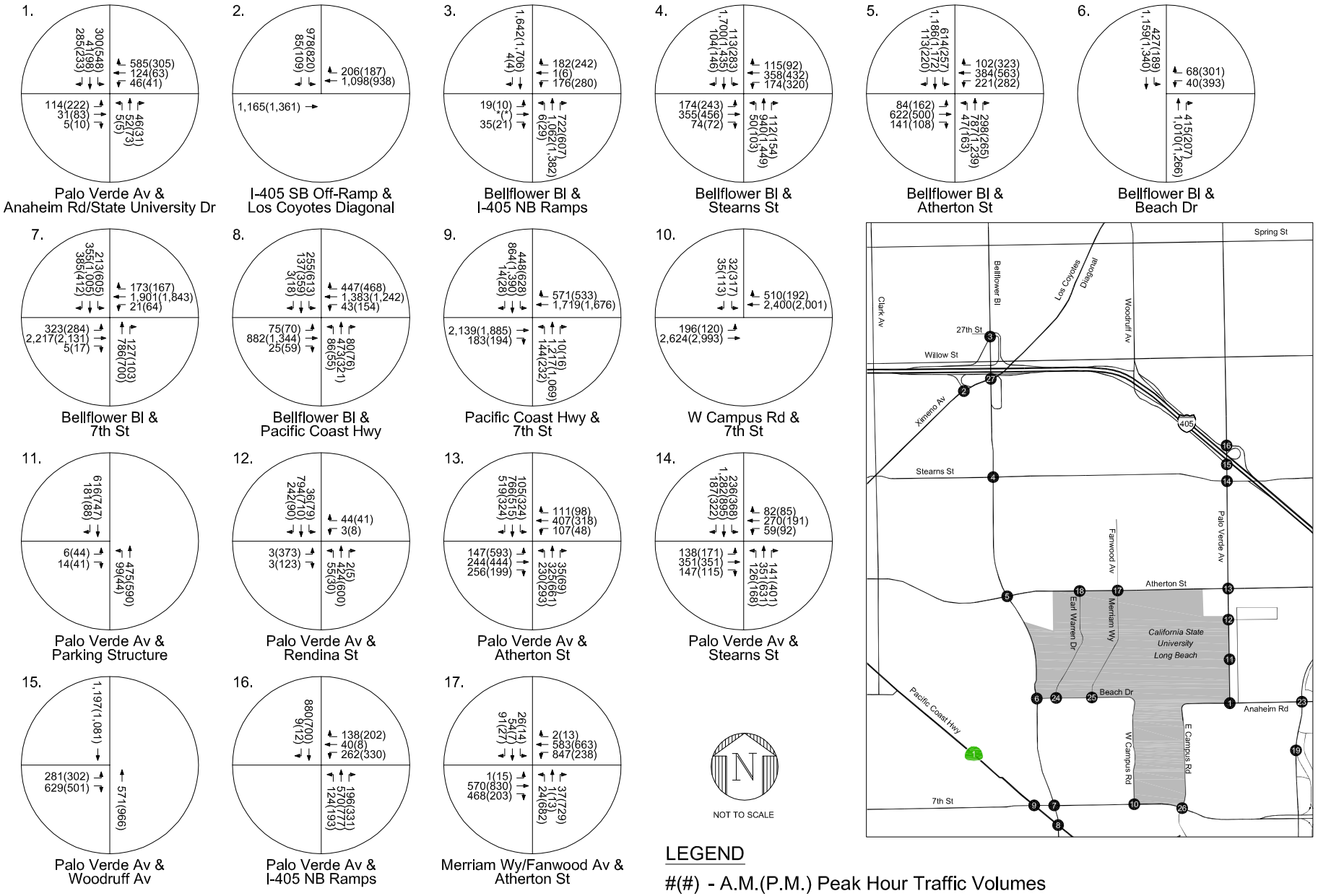

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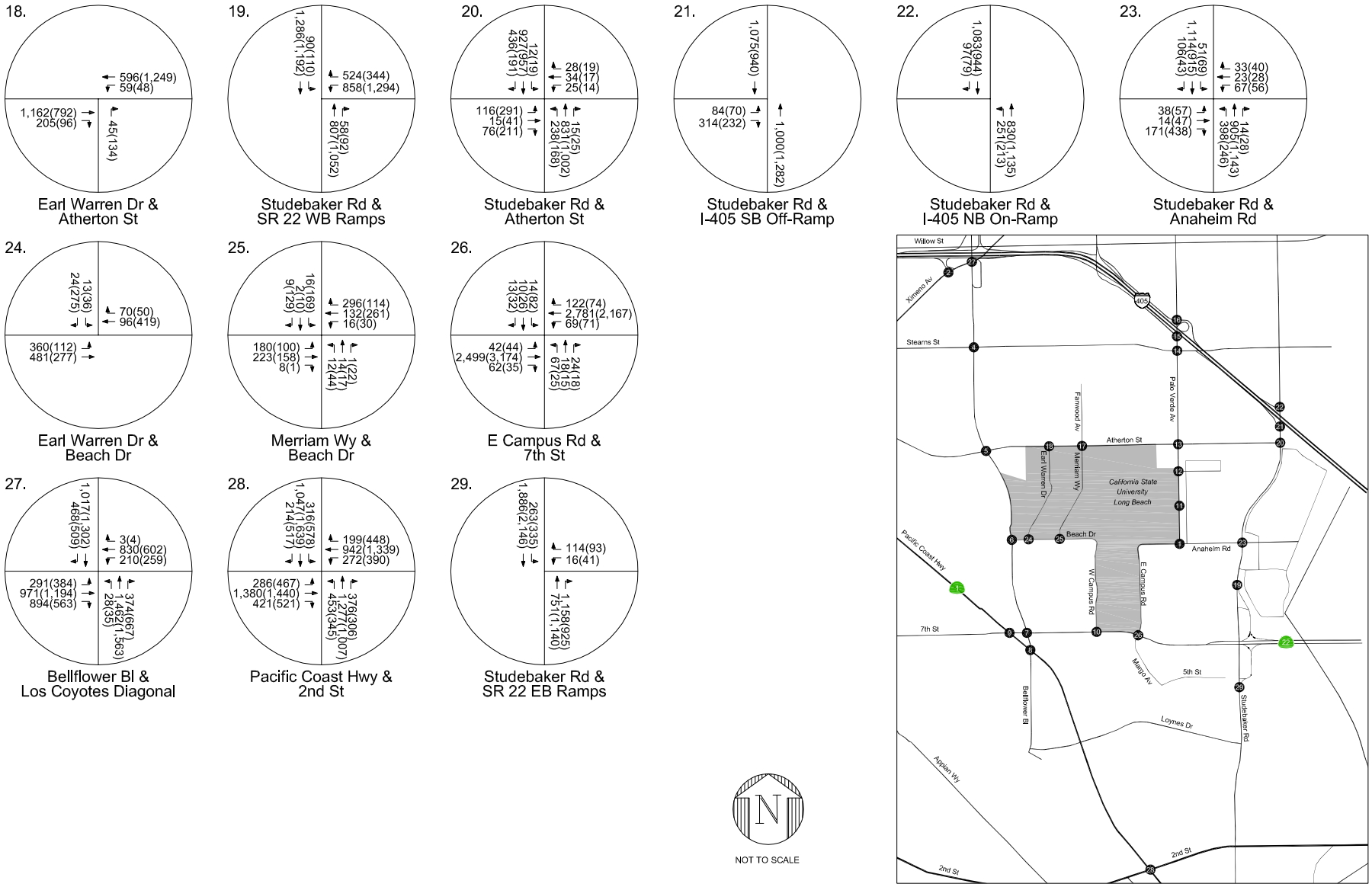
FIGURE 6
NEAR-TERM BASE (YEAR 2012) PEAK HOUR TRAFFIC VOLUMES



LEGEND

#(#) - A.M.(P.M.) Peak Hour Traffic Volume

* - Negligible Volumes

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FIGURE 6 (CONT.)
NEAR-TERM BASE (YEAR 2012) PEAK HOUR TRAFFIC VOLUMES

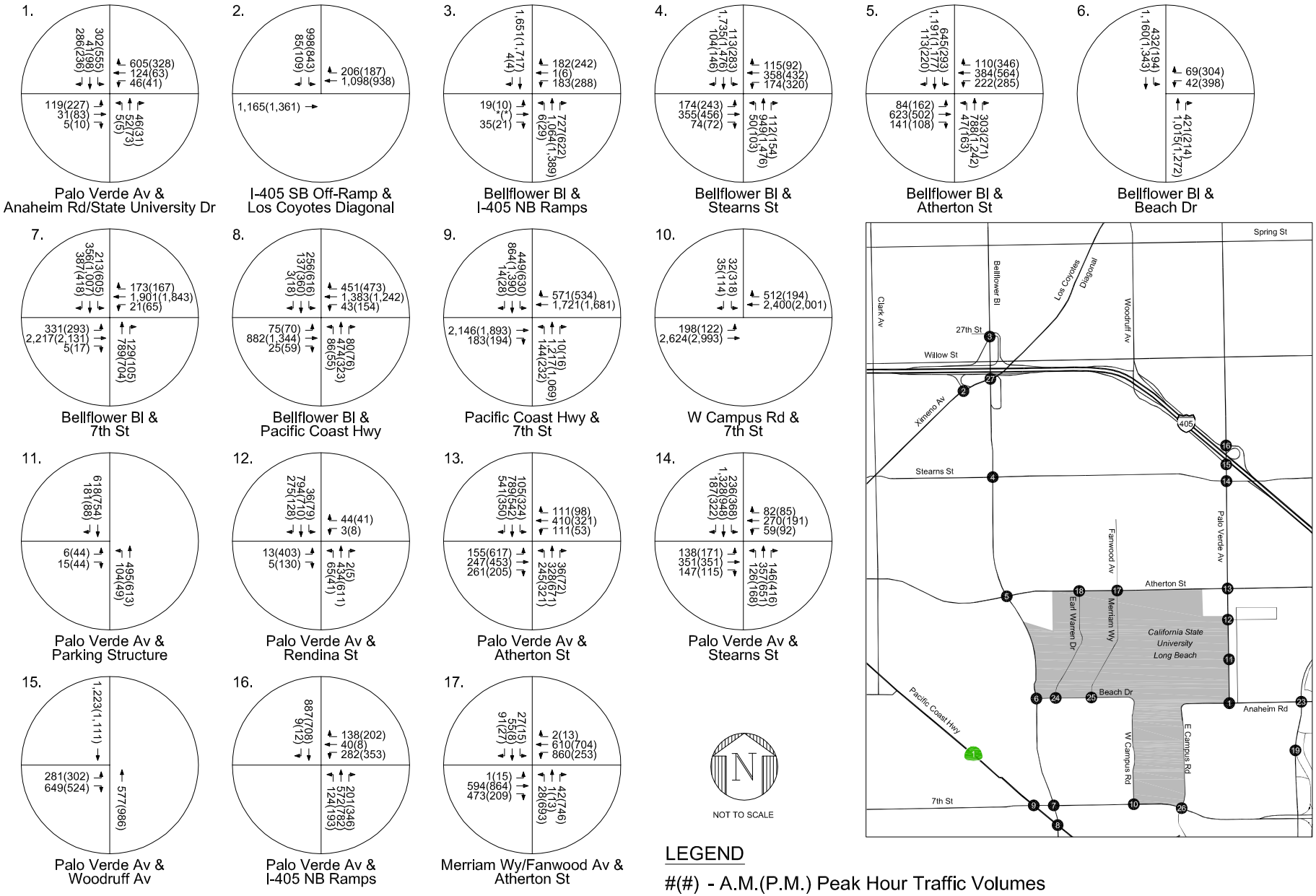

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FIGURE 7
NEAR-TERM PLUS PROJECT (YEAR 2012) PEAK HOUR TRAFFIC VOLUMES

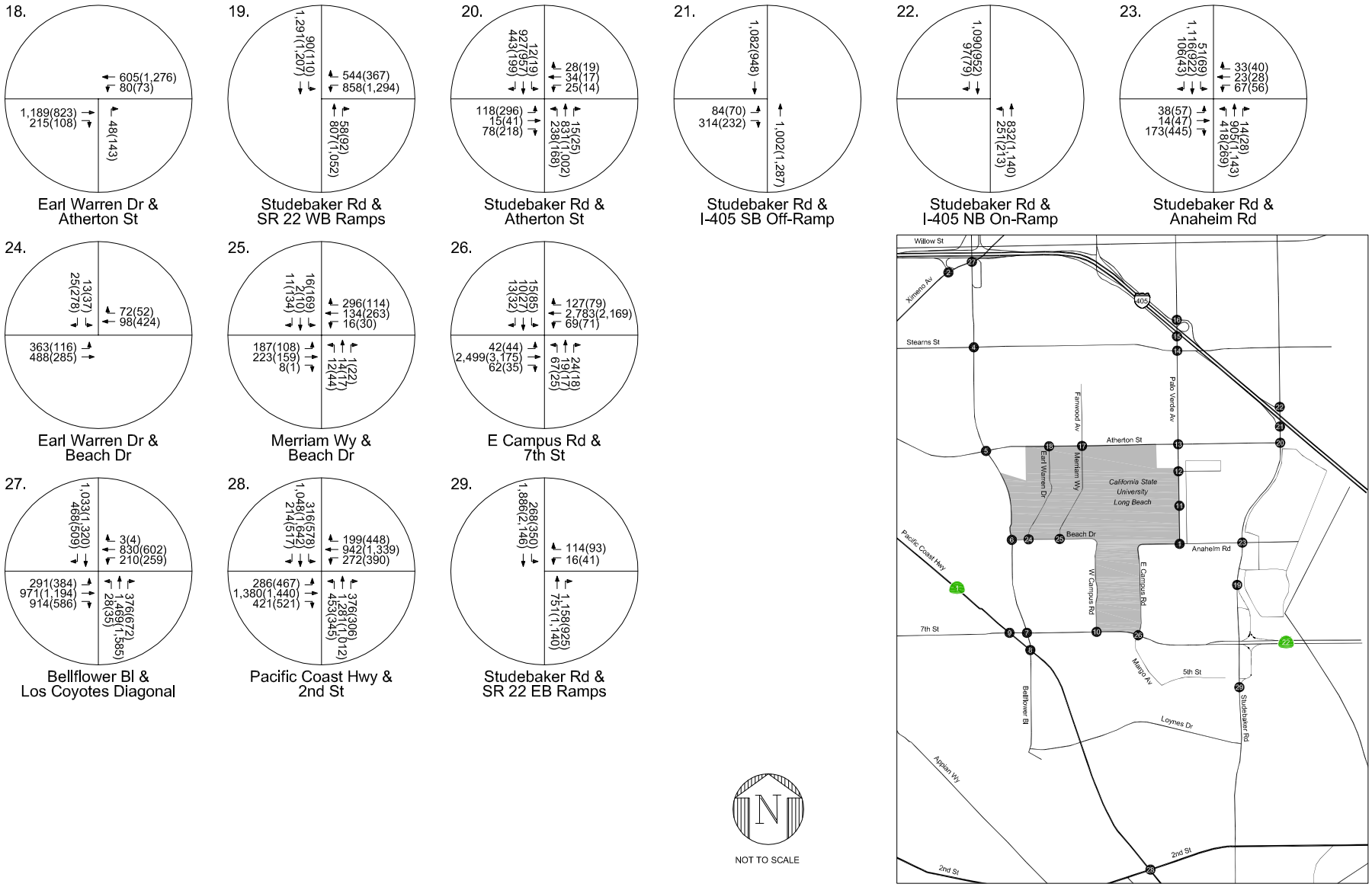

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FIGURE 7 (CONT.)
NEAR-TERM PLUS PROJECT (YEAR 2012) PEAK HOUR TRAFFIC VOLUMES

SIGNIFICANT TRAFFIC IMPACT CRITERIA

The City of Long Beach has established criteria to determine if a project has a significant traffic impact at an intersection. Under the City standard, a project impact would be considered significant if the intersection is operating at a LOS E or F after the addition of project traffic and the incremental change in the V/C ratio is 0.02 or greater. A project would not have a significant impact at an intersection if it were operating at LOS D or better after the addition of project traffic, regardless of the incremental change caused by the project.

For unsignalized intersections, the City does not specify the increase in delay that constitutes a significant impact. Therefore, for the purpose of this study, the V/C ratio was also calculated for unsignalized study intersections to determine if the V/C ratio increased by 0.02 or more under LOS E or F conditions resulting in a project impact.

NEAR-TERM BASE TRAFFIC CONDITIONS

The near-term base peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the study intersections. Table 7 summarizes near-term traffic operations during the a.m. and p.m. peak hours. As indicated in Table 7, poor operating conditions (LOS E or F) are projected at five of the study intersections during at least one of the analyzed peak hours. The intersections projected to operate at poor LOS under near-term base conditions during one or both of the analyzed peak periods include the following:

- Bellflower Boulevard & 7th Street – LOS E during the a.m. peak hour and LOS F during the p.m. peak hour
- Pacific Coast Highway & 7th Street – LOS F during the a.m. and p.m. peak hours
- Studebaker Road & SR-22 Westbound Ramps – LOS E during the p.m. peak hour
- Bellflower Boulevard & Los Coyotes Diagonal – LOS E during the p.m. peak hour
- Pacific Coast Highway & 2nd Street – LOS F during the a.m. and p.m. peak hours

The remaining study intersections are projected to operate at LOS D or better during both peak periods under near-term base conditions.

NEAR-TERM PLUS PROJECT TRAFFIC CONDITIONS

The near-term plus project peak hour traffic volumes were used to analyze the projected operating conditions with the addition of the proposed near-term campus growth. The results of the near-term plus project analysis, presented in Table 7, indicate that poor operating conditions (LOS E or F) are projected at six of the study intersections during at least one of the analyzed peak hours. The intersections projected to operate at poor LOS (LOS E or F) under near-term plus project conditions during one or both of the analyzed peak periods include the following:

- Bellflower Boulevard & 7th Street – LOS E during the a.m. peak hour and LOS F during the p.m. peak hour
- Pacific Coast Highway & 7th Street – LOS F during the a.m. and p.m. peak hours
- Studebaker Road & SR-22 Westbound Ramps – LOS E during the p.m. peak hour
- Bellflower Boulevard & Los Coyotes Diagonal – LOS E during the p.m. peak hour
- Pacific Coast Highway & 2nd Street – LOS F during the a.m. and p.m. peak hours

The remaining study intersections are projected to operate at LOS D or better during both peak periods under near-term base conditions.

PROJECT IMPACTS

As shown in Table 7, the increase in the V/C ratio at intersections projected to operate at LOS E or F under near-term plus project conditions is less than 0.02. Therefore, based on the City of Long Beach significant impact criteria, impacts would be less than significant under near-term (Year 2012-13) conditions.

TABLE 7
INTERSECTION LEVEL OF SERVICE ANALYSIS
NEAR-TERM (YEAR 2012-13) CONDITIONS

Intersections	Peak Hour	WITHOUT PROJECT		WITH PROJECT		IMPACT	
		V/C or Average (Worst) Delay	LOS	V/C or Average (Worst) Delay	LOS	Increase in V/C	Significant Impact
1. Palo Verde Avenue & Anaheim Road	A.M. P.M. A.M. P.M.	30 18	D C	34 19	D C	 0.016 0.019	 NO NO
2. I-405 SB Off-Ramp & Los Coyotes Diagonal	A.M. P.M.	0.675 0.674	B B	0.681 0.681	B B	0.006 0.007	NO NO
3. Bellflower Boulevard & I-405 NB Ramps	A.M. P.M.	0.555 0.604	A B	0.559 0.608	A B	0.004 0.004	NO NO
4. Bellflower Boulevard & Stearns Street	A.M. P.M.	0.764 0.855	C D	0.771 0.861	C D	0.007 0.006	NO NO
5. Bellflower Boulevard & Atherton Street	A.M. P.M.	0.811 0.824	D D	0.824 0.828	D D	0.013 0.004	NO NO
6. Bellflower Boulevard & Beach Drive	A.M. P.M.	0.535 0.611	A B	0.541 0.616	A B	0.006 0.005	NO NO
7. Bellflower Boulevard & 7th Street	A.M. P.M.	0.964 1.031	E F	0.970 1.038	E F	0.006 0.007	NO NO
8. Bellflower Boulevard & Pacific Coast Highway	A.M. P.M.	0.663 0.780	B C	0.663 0.782	B C	0.000 0.002	NO NO
9. Pacific Coast Highway & 7th Street	A.M. P.M.	1.033 1.064	F F	1.034 1.066	F F	0.001 0.002	NO NO
10. West Campus Road & 7th Street	A.M. P.M.	0.849 0.858	D D	0.850 0.859	D D	0.001 0.001	NO NO
11. Palo Verde Avenue & Parking Structure [a]	A.M. P.M. A.M. P.M.	1 (23.1) 1 (29.2)	A (C) A (D)	1 (23.8) 2 (30.7)	A (C) A (D)	 0.005 0.006	 NO NO
12. Palo Verde Avenue & Rendina Street	A.M. P.M.	0.413 0.486	A A	0.422 0.504	A A	0.009 0.018	NO NO
13. Palo Verde Avenue & Atherton Street	A.M. P.M.	0.770 0.824	C D	0.791 0.835	C D	0.021 0.011	NO NO
14. Palo Verde Avenue & Stearns Street	A.M. P.M.	0.776 0.774	C C	0.790 0.783	C C	0.014 0.009	NO NO
15. Palo Verde Avenue & Woodruff Avenue	A.M. P.M.	0.867 0.751	D C	0.888 0.775	D C	0.021 0.024	NO NO

TABLE 7
INTERSECTION LEVEL OF SERVICE ANALYSIS
NEAR-TERM (YEAR 2012-13) CONDITIONS

Intersections	Peak Hour	WITHOUT PROJECT		WITH PROJECT		IMPACT	
		V/C or Average (Worst) Delay	LOS	V/C or Average (Worst) Delay	LOS	Increase in V/C	Significant Impact
16. Palo Verde Avenue & I-405 NB Off-Ramp	A.M. P.M.	0.619 0.649	B B	0.634 0.666	B B	0.015 0.017	NO NO
17. Merriam Way/Fanwood Drive Atherton Street	A.M. P.M.	0.777 0.760	C C	0.787 0.783	C C	0.010 0.023	NO NO
18. Earl Warren Drive & Atherton Street [a]	A.M. P.M. A.M. P.M.	1 (13.6) 1 (12.6)	A (B) A (B)	1 (13.9) 1 (13.0)	A (B) A (B)	 0.024 0.014	 NO NO
19. Studebaker Road & SR-22 WB Ramps	A.M. P.M.	0.770 0.902	C E	0.772 0.902	C E	0.002 0.000	NO NO
20. Studebaker Road & Atherton Street	A.M. P.M.	0.630 0.697	B B	0.632 0.700	B B	0.002 0.003	NO NO
21. Studebaker Road & I-405 SB Off-Ramp [a]	A.M. P.M. A.M. P.M.	7 (120.1) 4 (96.4)	A (F) A (F)	7 (123.4) 4 (99.5)	A (F) A (F)	 0.002 0.001	 NO NO
22. Studebaker Road & I-405 NB On-Ramp	A.M. P.M.	0.595 0.528	A A	0.598 0.531	A A	0.003 0.003	NO NO
23. Studebaker Road & Anaheim Road	A.M. P.M.	0.797 0.726	C C	0.810 0.745	D C	0.013 0.019	NO NO
24. Earl Warren Dr & Beach Drive [a]	A.M. P.M. A.M. P.M.	4 (29.4) 4 (18.8)	A (D) A (C)	4 (30.0) 4 (19.3)	A (D) A (C)	 0.004 0.007	 NO NO
25. Merriam Way & Beach Drive [a]	A.M. P.M. A.M. P.M.	10 12	A B	10 12	B B	 0.005 0.009	 NO NO
26. East Campus Road & 7th Street	A.M. P.M.	0.808 0.893	D D	0.811 0.896	D D	0.003 0.003	NO NO
27. Bellflower Boulevard & Los Coyotes Diagonal	A.M. P.M.	0.822 0.918	D E	0.827 0.925	D E	0.005 0.007	NO NO
28. Pacific Coast Highway & 2nd Street	A.M. P.M.	1.014 1.160	F F	1.015 1.161	F F	0.001 0.001	NO NO
29. Studebaker Road & SR-22 EB Ramps	A.M. P.M.	0.761 0.829	C D	0.761 0.829	C D	0.000 0.000	NO NO

Notes:

[a] Intersection is controlled by stop signs. The top rows show analysis using *Highway Capacity Manual* stop-controlled methodology, for the purpose of evaluating the operating condition of the intersection. Average (worst case) intersection vehicular delay in seconds per vehicle is reported rather than V/C ratio. The bottom rows show analysis using ICU methodology. V/C ratio is reported.

IV. CUMULATIVE (2020) TRAFFIC CONDITIONS

To evaluate the potential traffic impacts with buildout of the CSU Long Beach Master Plan, traffic forecasts were developed to reflect Year 2020 conditions both with and without the proposed campus growth. Future traffic volumes without the project were first estimated, representing the cumulative base conditions. The traffic generated by buildout of the Master Plan was then estimated and assigned to the surrounding street system. The sum of the cumulative base and project-generated traffic represents cumulative plus project conditions.

CUMULATIVE BASE TRAFFIC PROJECTIONS

The cumulative base traffic projections reflect growth in traffic from two primary sources: background or ambient growth in the existing traffic volumes to reflect the effects of overall regional growth both in and outside of the study area, and traffic generated by specific projects located within, or in the vicinity of, the study area. These factors are described below.

Areawide Traffic Growth

The cumulative forecasts without the project reflect traffic increases due to general regional growth. Existing traffic volumes are expected to increase at a rate of 0.5% a year due to ambient growth based on projections from the SCAG regional travel demand forecasting model. Therefore, 2007 traffic volumes were increased by 6.5% to reflect regional traffic growth between existing and Year 2020 conditions.

Related Project Growth

Cumulative traffic forecasts also include the effects of specific projects, called related projects, expected to be implemented in the vicinity of CSU Long Beach within the next several years.

The related projects applied to the cumulative conditions analysis are consistent with those discussed under near-term conditions (refer to Table 5 and Figure 3).

Based on the related project locations and their expected trip distribution, traffic generated by the related projects was assigned to the street network in the study area. The addition of ambient growth (6.5 percent) and related project trips to existing traffic volumes yields "cumulative no project" a.m. and p.m. peak hour traffic forecasts at each study intersection.

CUMULATIVE PLUS PROJECT TRAFFIC PROJECTIONS

The development of traffic forecasts with buildout of the CSU Long Beach Master Plan is based on a three-step process involving trip generation estimates, trip distribution, and trip assignment as described below.

Proposed Master Plan Buildout

As described in Chapter I, the CSU Long Beach Master Plan has a horizon year of 2020. The Master Plan proposed the following uses at CSU Long Beach under Year 2020 conditions:

- 31,000 FTE students
- 980 beds for student housing, Phase 1
- 1,034 beds for student housing, Phase 2
- Liberal Arts Replacement Buildings (no new students)
- Soccer Complex (no new students)
- Parking Structure #3 – 1,321 total spaces on Lot 11
- Parking Structure #4 – 1,150 total spaces on Lot 14A
- Parking Structure #5 – 1,360 total spaces on Lot 7

The traffic impacts associated with Phase 1 student housing (980 beds) and Parking Structure #3 were also analyzed under near-term conditions. To reflect 2020 conditions, traffic generated by full buildout of the Master Plan (including near-term projects) was considered in the cumulative conditions analysis.

The new parking structures proposed under the Master Plan would replace existing surface parking lots. The new parking structures are on Palo Verde Avenue south of Atherton Street (Structure #3, existing Lot 11), between Earl Warren Drive and Merriam Way south of Atherton Street (Structure #4, existing Lot 14A), and just west of East Campus Drive north of 7th Street (Structure #5, existing Lot 7). Table 8 summarizes the amount of new parking provided with the implementation of the CSU Long Beach Master Plan.

Project Traffic Generation

Similar to near-term conditions, trip generation estimates for the proposed project were prepared using rates from *Trip Generation, 7th Edition* and from trip generation rates gathered at other universities for on-campus housing. ITE trip generation rates for universities are based on traffic count surveys collected at various universities throughout the country. The trip rates are reported on a "per student" basis; however, they include all student, faculty, staff, and visitor trips to/from campus. The number of students residing in on-campus student housing at CSU Long Beach were subtracted from the number of FTE students to avoid double counting trips generated by the proposed campus growth.

The trip rates and resulting daily and peak hour trip generation of the proposed cumulative campus growth is shown in Table 9. As shown, the proposed project would generate approximately 12,000 daily trips, including approximately 790 trips during the a.m. peak hour and 970 trips during the p.m. peak hours. These trips reflect a 10 percent vehicle-trip reduction in commuter students to account for enhanced transit services at CSU Long Beach.

Project Traffic Distribution

The distribution of vehicle-trips to/from CSU Long Beach is consistent with near-term conditions as discussed in Chapter III and shown in Figure 4.

Using the estimated trip generation and the distribution patterns shown in Figure 4, the traffic generated by the proposed project was assigned to the street network within the study area. Vehicles traveling to CSU Long Beach were primarily assigned to the new parking structures on

TABLE 8
CSULB MASTER PLAN
PROPOSED PARKING STRUCTURES

Parking Structure	Existing Parking Spaces	Proposed Parking Spaces	Net New Parking Spaces
Structure #3 (Lot 11)	401	1,321	920
Structure #4 (Lot 14A)	1,097	1,150	53
Structure #5 (Lot 7)	211	1,360	1,149
Total	**1,709**	**3,831**	**2,122**

TABLE 9
CSU LONG BEACH BUILDOUT MASTER PLAN TRIP GENERATION ESTIMATES
ACADEMIC GROWTH

Trip Generation Rates

Land Use	TRIP RATE CATEGORY [1]	Units	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Trip Rate	In	Out	Trip Rate
CSULB FTE Students	University/College	FTE Students	2.38	80%	20%	0.21	30%	70%	0.21
Commute Student Reduction	University/College	FTE Students	1.19	80%	20%	0.11	30%	70%	0.11
CSULB Student Housing	Student Beds	Beds	2.16	17%	83%	0.06	73%	27%	0.15

Cumulative Project Trips: Trip Generation Estimates for Incremental Increase between Existing and Master Plan Buildout Conditions

Land Use	ITE TRIP RATE CATEGORY	Size	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
CSULB FTE Students	University/College	4,560	10,853	766	192	958	287	671	958
Commute Student Reduction	University/College	-2,014	-2,396	-85	-126	-211	-32	-179	-211
CSULB Student Housing	Student Beds	2,014	4,350	21	100	121	220	82	302
10% Transit Reduction for Commuting Students & Faculty/Staff			-846	-68	0	-75	-26	-49	-75
		Total	**11,961**	**634**	**166**	**793**	**449**	**525**	**974**

Notes:

[1] Trip rates for FTE students based on *Trip Generation, 7th Edition*.

The on-campus student reduction assumes that the ITE trip rates reflect 1/2 trips generated by students and 1/2 trips generated by faculty/staff and visitors.

Trip rates for on-campus student housing based on trip generation studies conducted for UC Santa Barbara, San Jose State University, Stanford, and Cal Poly Pomona.

ITE Trip generation rates are on a "per student" basis, but include all trips to campus such as students, faculty/staff, visitors and on-campus housing.

Palo Verde Avenue south of Atherton Street (Structure #3), between Earl Warren Drive and Merriam Way south of Atherton Street (Structure #4), and just west of East Campus Drive north of 7th Street (Structure #5). The remaining vehicles were assigned to existing surface lots and parking structures on campus.

Project Traffic Assignment

Vehicle trips generated by the project were added to cumulative base traffic volumes based on the expected distribution of trips to yield "cumulative plus project" a.m. and p.m. peak hour traffic volumes at the study intersections. Figure 8 displays the "project only" trips generated by the proposed Master Plan under Year 2020 conditions.

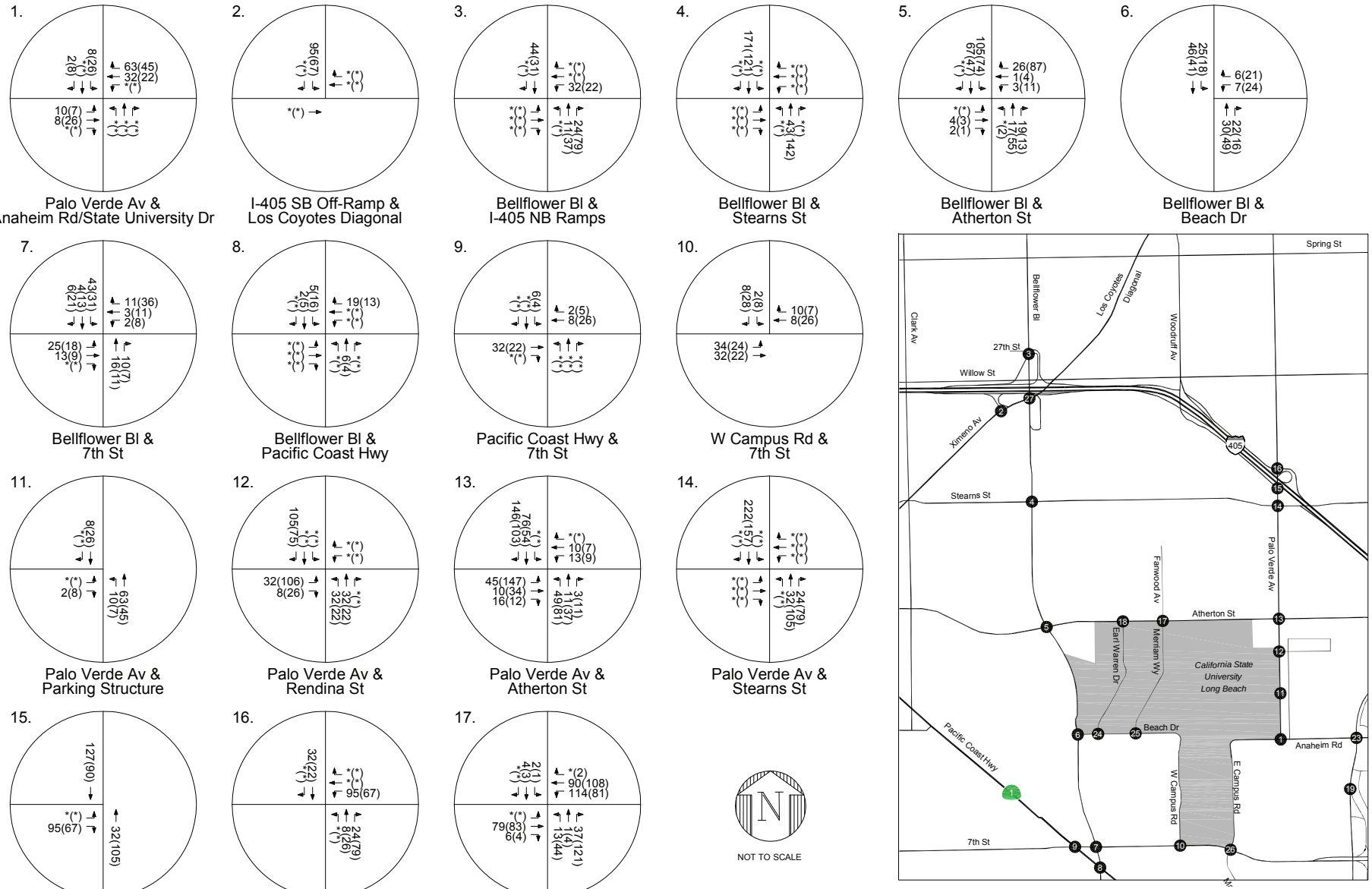
CUMULATIVE TRAFFIC PROJECTIONS

Figure 9 illustrates the cumulative base traffic forecasts for the study intersections during the a.m. and p.m. peak hours. The proposed cumulative project traffic volumes (shown in Figure 8) were added to the cumulative base traffic projections. The resulting projected traffic volumes of the cumulative base plus Master Plan buildout conditions for the weekday a.m. and p.m. peak hours are illustrated in Figure 10.

CUMULATIVE TRAFFIC IMPACT ANALYSIS

The traffic impact analysis compares the projected LOS at each study intersection under the cumulative base and cumulative plus project conditions to determine the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significance criteria established by the City of Long Beach.

The City of Long Beach Capital Improvement Program (*Proposed Capital Improvement Program Fiscal Year 2008*, City of Long Beach, July 1, 2007) was reviewed to determine if roadway improvements were planned in the study area. The City's Capital Improvement Program does not propose any roadway widening or intersection improvements near CSU Long



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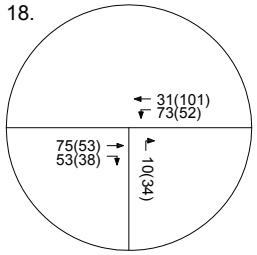
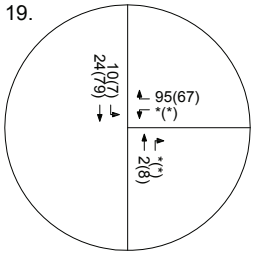
KAKU ASSOCIATES

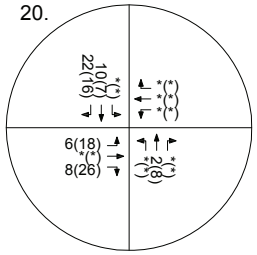
FIGURE 8
PROJECT ONLY (YEAR 2020) PEAK HOUR TRAFFIC VOLUMES



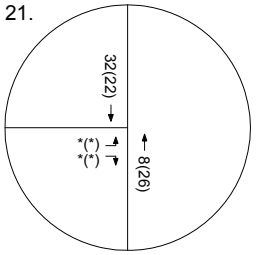
Earl Warren Dr &
Atherton St



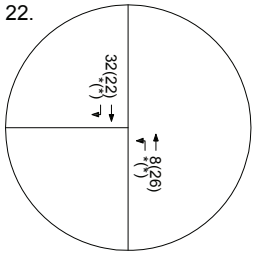
Studebaker Rd &
SR 22 WB Ramps



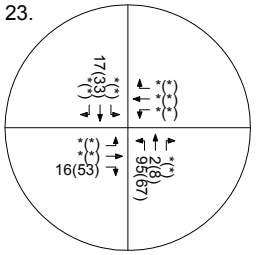
Studebaker Rd &
Atherton St



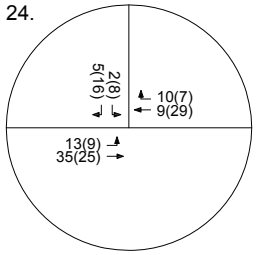
Studebaker Rd &
I-405 SB Off-Ramp



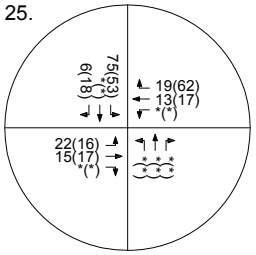
Studebaker Rd &
I-405 NB On-Ramp



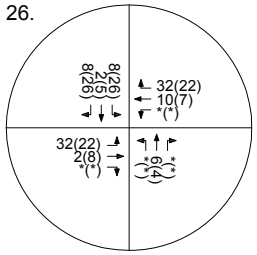
Studebaker Rd &
Anaheim Rd



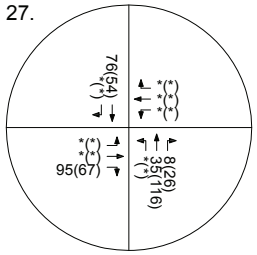
Earl Warren Dr &
Beach Dr



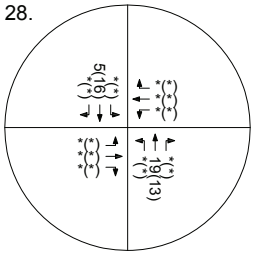
Merriam Wy &
Beach Dr



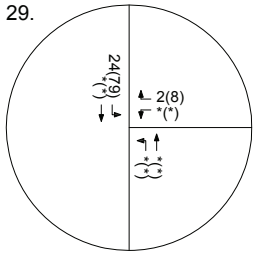
E Campus Rd &
7th St



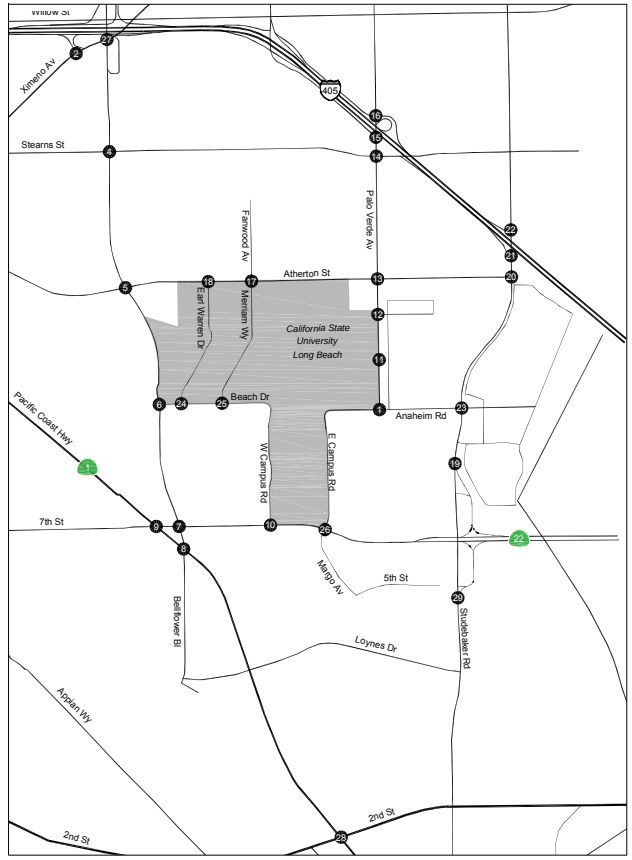
Bellflower Bl &
Los Coyotes Diagonal



Pacific Coast Hwy &
2nd St



Studebaker Rd &
SR 22 EB Ramps



N

NOT TO SCALE

LEGEND

#(#) - A.M.(P.M.) Peak Hour Traffic Volume

* - Negligible Volumes

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FIGURE 8 (CONT.)
PROJECT ONLY (YEAR 2020) PEAK HOUR TRAFFIC VOLUMES

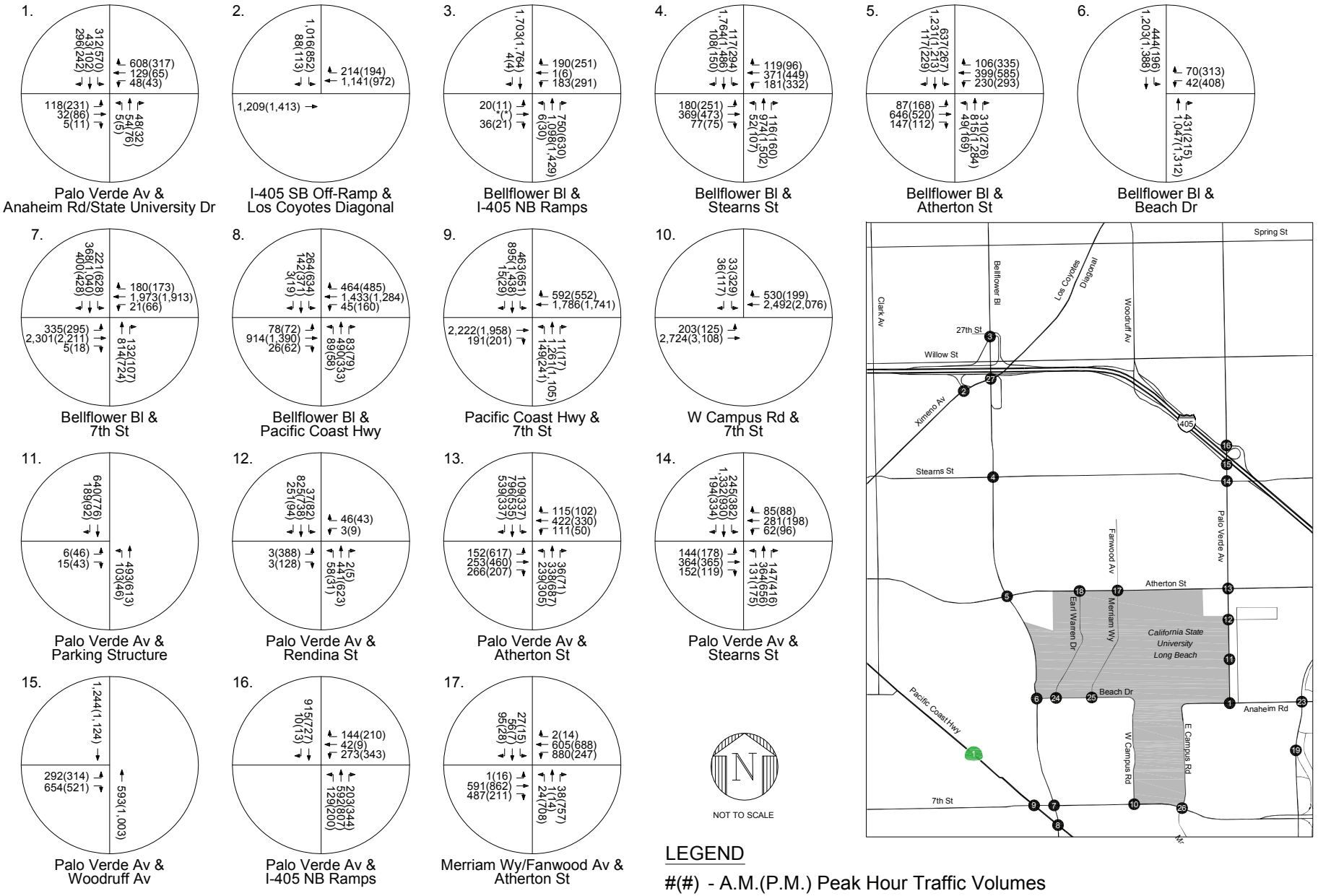

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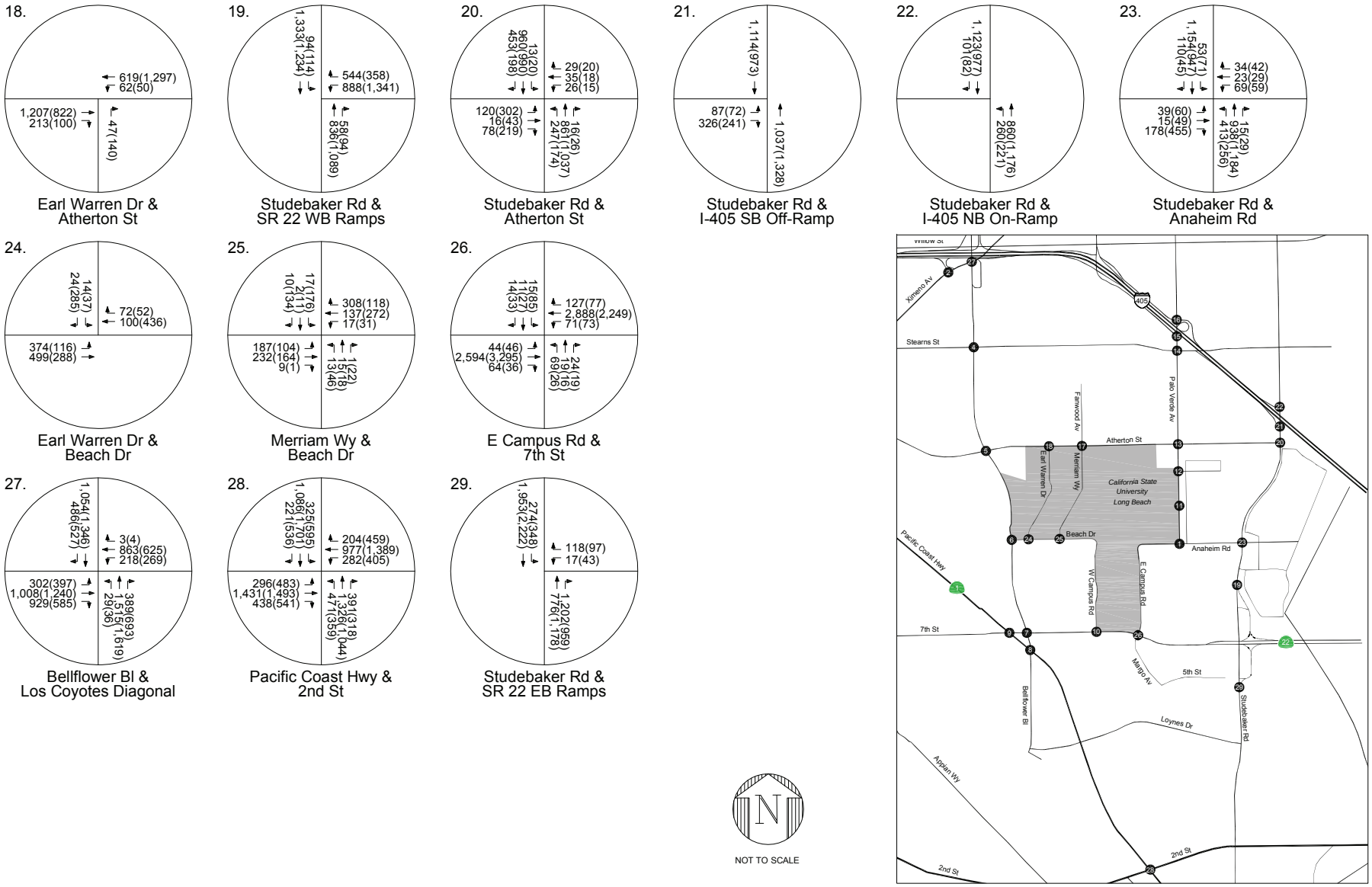
FIGURE 9
CUMULATIVE BASE (YEAR 2020) PEAK HOUR TRAFFIC VOLUMES



LEGEND

#(#) - A.M.(P.M.) Peak Hour Traffic Volume

* - Negligible Volumes

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KAKU ASSOCIATES

FIGURE 9 (CONT.)
CUMULATIVE BASE (YEAR 2020) PEAK HOUR TRAFFIC VOLUMES

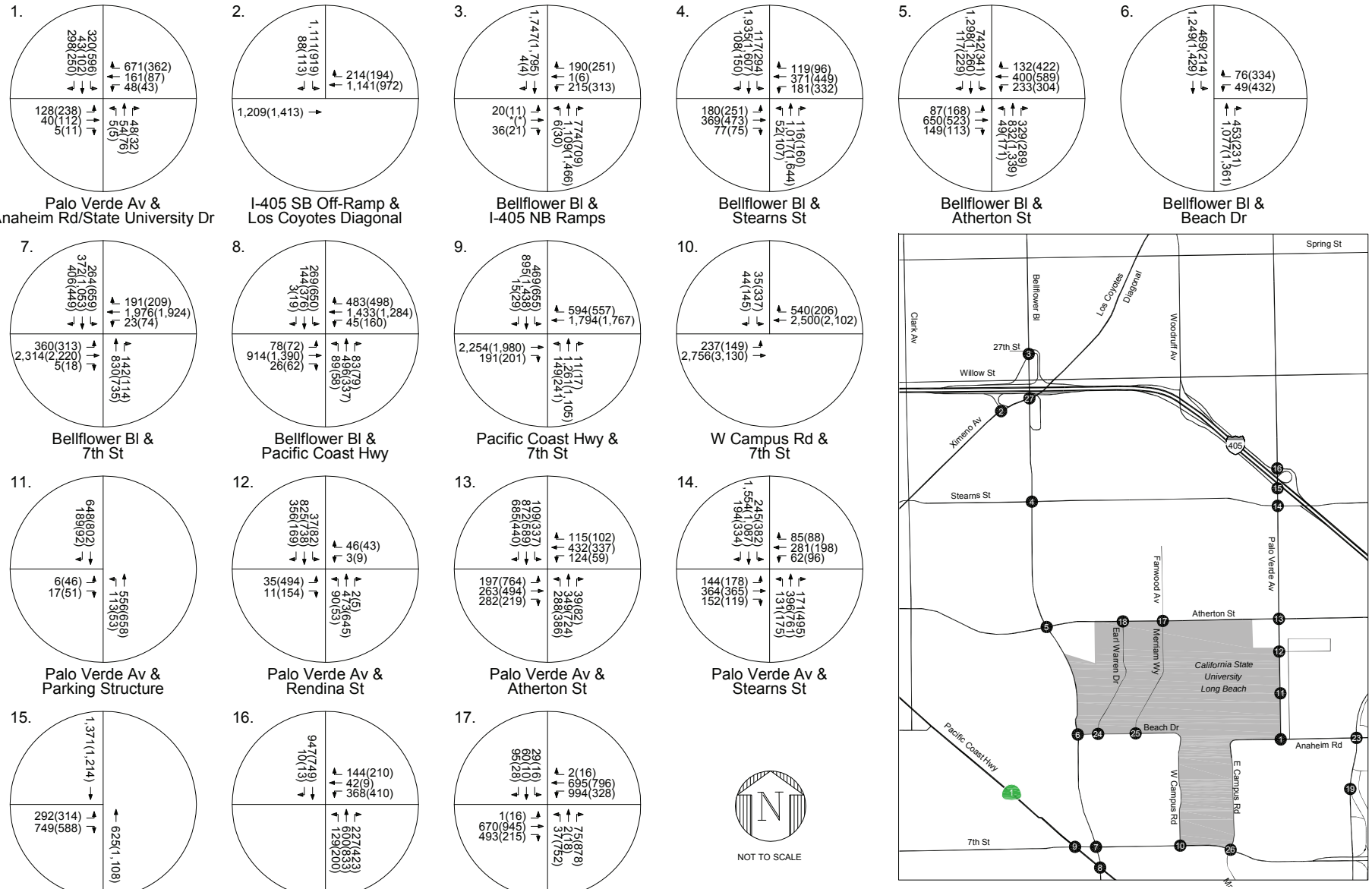

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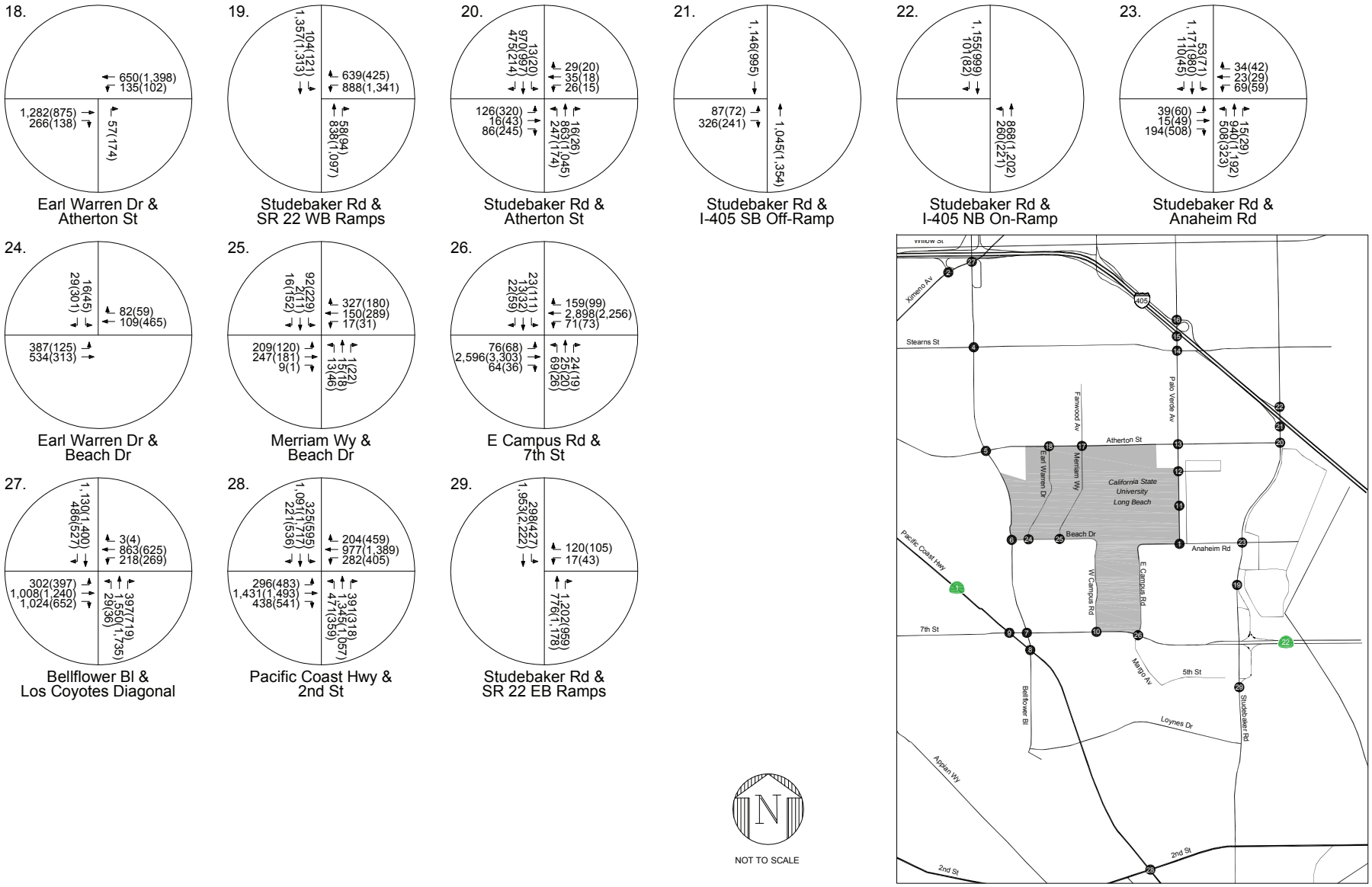
FIGURE 10
CUMULATIVE PLUS PROJECT (YEAR 2020) PEAK HOUR TRAFFIC VOLUMES



LEGEND

#(#) - A.M.(P.M.) Peak Hour Traffic Volume

* - Negligible Volumes

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FIGURE 10 (CONT.)
CUMULATIVE PLUS PROJECT (YEAR 2020) PEAK HOUR TRAFFIC VOLUMES

Beach. Therefore, no roadway improvements were assumed in place and the existing lane configurations at the study intersections were applied for the cumulative impact analysis.

CUMULATIVE BASE TRAFFIC CONDITIONS

The cumulative base peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the study intersections. Table 10 summarizes cumulative traffic operations during the a.m. and p.m. peak hours. As indicated in Table 9, poor operating conditions (LOS E or F) are projected at seven of the study intersections during at least one of the analyzed peak hours. The intersections projected to operate at poor LOS under cumulative year 2020 base conditions during one or both of the analyzed peak periods include the following:

- Palo Verde Avenue & Anaheim Road – LOS E during the a.m. peak hour
- Bellflower Boulevard & 7th Street – LOS E during the a.m. peak hour and LOS F during the p.m. peak hour
- Pacific Coast Highway & 7th Street – LOS F during the a.m. and p.m. peak hours
- Studebaker Road & SR-22 Westbound Ramps – LOS E during the p.m. peak hour
- East Campus Road & 7th Street – LOS E during the p.m. peak hour
- Bellflower Boulevard & Los Coyotes Diagonal – LOS E during the p.m. peak hour
- Pacific Coast Highway & 2nd Street – LOS F during the a.m. and p.m. peak hours

The remaining study intersections are projected to operate at LOS D or better during both peak periods under cumulative base conditions.

CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

The cumulative plus project peak hour traffic volumes were used to analyze the projected operating conditions with the buildout of the CSU Long Beach Master Plan. The results of the cumulative plus project analysis, shown in Table 10, indicate that poor operating conditions (LOS

TABLE 10
INTERSECTION LEVEL OF SERVICE ANALYSIS
CUMULATIVE (YEAR 2020) CONDITIONS

Intersections	Peak Hour	WITHOUT PROJECT		WITH PROJECT		IMPACT	
		V/C or Average (Worst) Delay	LOS	V/C or Average (Worst) Delay	LOS	Increase in V/C	Significant Impact
1. Palo Verde Avenue & Anaheim Road	A.M. P.M. A.M. P.M.	35.000 19.000	E C	52.000 24.000	F C	 0.047 0.041	 NO NO
2. I-405 SB Off-Ramp & Los Coyotes Diagonal	A.M. P.M.	0.697 0.696	B B	0.727 0.717	C C	 0.021	NO NO
3. Bellflower Boulevard & I-405 NB Ramps	A.M. P.M.	0.572 0.621	A B	0.588 0.632	A B	0.016 0.011	NO NO
4. Bellflower Boulevard & Stearns Street	A.M. P.M.	0.788 0.886	C D	0.824 0.912	D E	0.036 0.026	NO YES
5. Bellflower Boulevard & Atherton Street	A.M. P.M.	0.743 0.820	C D	0.781 0.886	C D	0.038 0.066	NO NO
6. Bellflower Boulevard & Beach Drive	A.M. P.M.	0.552 0.630	A B	0.577 0.659	A B	0.025 0.029	NO NO
7. Bellflower Boulevard & 7th Street	A.M. P.M.	0.997 1.066	E F	1.032 1.099	F F	0.035 0.033	YES YES
8. Bellflower Boulevard & Pacific Coast Highway	A.M. P.M.	0.683 0.805	B D	0.686 0.811	B D	0.003 0.006	NO NO
9. Pacific Coast Highway & 7th Street	A.M. P.M.	1.068 1.100	F F	1.073 1.108	F F	0.005 0.008	NO NO
10. West Campus Road & 7th Street	A.M. P.M.	0.877 0.887	D D	0.909 0.903	E E	0.032 0.016	YES NO
11. Palo Verde Avenue & Parking Structure [a]	A.M. P.M. A.M. P.M.	1 (24.4) 2 (31.9)	A (C) A (D)	1 (26.5) 2 (35.8)	A (D) A (E)	 0.010 0.013	 NO NO
12. Palo Verde Avenue & Rendina Street	A.M. P.M.	0.426 0.501	A A	0.456 0.551	A A	0.030 0.050	NO NO
13. Palo Verde Avenue & Atherton Street	A.M. P.M.	0.796 0.853	C D	0.843 0.904	D E	0.047 0.051	NO YES
14. Palo Verde Avenue & Stearns Street	A.M. P.M.	0.803 0.799	D C	0.872 0.849	D D	0.069 0.050	NO NO
15. Palo Verde Avenue & Woodruff Avenue	A.M. P.M.	0.795 0.777	C C	0.880 0.847	D D	0.085 0.070	NO NO

TABLE 10
INTERSECTION LEVEL OF SERVICE ANALYSIS
CUMULATIVE (YEAR 2020) CONDITIONS

Intersections	Peak Hour	WITHOUT PROJECT		WITH PROJECT		IMPACT	
		V/C or Average (Worst) Delay	LOS	V/C or Average (Worst) Delay	LOS	Increase in V/C	Significant Impact
16. Palo Verde Avenue & I-405 NB Off-Ramp	A.M. P.M.	0.640 0.671	B B	0.710 0.719	C C	0.070 0.048	NO NO
17. Merriam Way/Fanwood Drive & Atherton Street	A.M. P.M.	0.804 0.786	D C	0.858 0.875	D D	0.054 0.089	NO NO
18. Earl Warren Drive & Atherton Street [a]	A.M. P.M. A.M. P.M.	1(14.0) 1(12.9)	A (B) A (B)	1 (17.0) 1 (14.0)	A (C) A (B)	0.076 0.053	NO NO
19. Studebaker Road & SR-22 WB Ramps	A.M. P.M.	0.794 0.931	C E	0.802 0.938	D E	0.008 0.007	NO NO
20. Studebaker Road & Atherton Street	A.M. P.M.	0.649 0.718	B C	0.656 0.732	B C	0.007 0.014	NO NO
21. Studebaker Road & I-405 SB Off-Ramp [a]	A.M. P.M. A.M. P.M.	9 (154.0) 5 (118.8)	A (F) A (F)	9 (174.1) 5 (132.9)	A (F) A (F)	0.010 0.008	NO NO
22. Studebaker Road & I-405 NB On-Ramp	A.M. P.M.	0.613 0.543	B A	0.623 0.550	B A	0.010 0.007	NO NO
23. Studebaker Road & Anaheim Road	A.M. P.M.	0.822 0.750	D C	0.892 0.819	D D	0.070 0.069	NO NO
24. Earl Warren Dr & Beach Drive [a]	A.M. P.M. A.M. P.M.	4 (31.9) 4 (19.7)	A (D) A (C)	4 (35.8) 5 (22.2)	A (E) A (C)	0.018 0.027	NO NO
25. Merriam Way & Beach Drive [a]	A.M. P.M. A.M. P.M.	10.000 12.000	B B	11.000 15.000	B B	0.075 0.079	NO NO
26. East Campus Road & 7th Street	A.M. P.M.	0.835 0.923	D E	0.873 0.944	D E	0.038 0.021	NO YES
27. Bellflower Boulevard & Los Coyotes Diagonal	A.M. P.M.	0.849 0.948	D E	0.877 0.967	D E	0.028 0.019	NO NO
28. Pacific Coast Highway & 2nd Street	A.M. P.M.	1.047 1.200	F F	1.051 1.203	F F	0.004 0.003	NO NO
29. Studebaker Road & SR-22 EB Ramps	A.M. P.M.	0.784 0.855	C D	0.785 0.860	C D	0.001 0.005	NO NO

Notes:

[a] Intersection is controlled by stop signs. The top rows show analysis using *Highway Capacity Manual* stop-controlled methodology, for the purpose of evaluating the operating condition of the intersection. Average (worst case) intersection vehicular delay

E or F) are projected at ten of the study intersections during at least one of the analyzed peak hours. The intersections projected to operate at poor LOS (LOS E or F) under cumulative plus project conditions during one or both of the analyzed peak periods include the following:

- Palo Verde Avenue & Anaheim Road – LOS F during the a.m. peak hour
- Bellflower Boulevard & Stearns Street – LOS E during the p.m. peak hour
- Bellflower Boulevard & 7th Street – LOS F during the a.m. and p.m. peak hours
- Pacific Coast Highway & 7th Street – LOS F during the a.m. and p.m. peak hours
- West Campus Road & 7th Street – LOS E during the a.m. and p.m. peak hours
- Palo Verde Avenue & Atherton Street – LOS E during the p.m. peak hour
- Studebaker Road & SR-22 Westbound Ramps – LOS E during the p.m. peak hour
- East Campus Road & 7th Street – LOS E during the p.m. peak hour
- Bellflower Boulevard & Los Coyotes Diagonal – LOS E during the p.m. peak hour
- Pacific Coast Highway & 2nd Street – LOS F during the a.m. and p.m. peak hours

The remaining study intersections are projected to operate at LOS D or better during both peak periods under cumulative base conditions.

PROJECT IMPACTS

As shown in Table 10, the increase in the V/C ratio at intersections projected to operate at LOS E or F under cumulative plus project conditions is greater than 0.02 at five study intersections. Therefore, based on the City of Long Beach significant impact criteria, these intersections would experience a significant impact with buildout of the CSU Long Beach Master Plan under cumulative (2020) conditions. The significantly impacted study intersections are:

- Bellflower & Stearns Street – LOS E during the p.m. peak hour (V/C increase of 0.026)
- Bellflower Boulevard & 7th Street – LOS F during the a.m. peak hour (V/C increase of 0.035) and LOS F during the p.m. peak hour (V/C increase of 0.033)

- West Campus Road & 7th Street – LOS E during the a.m. peak hour (V/C increase of 0.032)

- Palo Verde & Atherton Street – LOS E during the p.m. peak hour (V/C increase of 0.051)

- East Campus Road & 7th Street – LOS E during the p.m. peak hour (V/C increase of 0.021)

PROPOSED MITIGATION MEASURES

Mitigation measures were developed to alleviate the traffic impacts of buildout of the Master Plan under cumulative (Year 2020) conditions. Potential mitigation measures for impacted study intersections are presented below. Table 11 summarizes the resulting traffic operations under cumulative conditions with implementation of the identified mitigation measures.

- Bellflower Boulevard & Stearns Street – This intersection is projected to operate at LOS D during the p.m. peak hour under cumulative base conditions with buildout of the CSU Long Beach Master Plan and would degrade to LOS E during the p.m. peak hour (V/C increase of 0.026). Therefore, this intersection would be **significantly impacted** under cumulative conditions.

  To mitigate the project impact, an additional left-turn lane could be provided on westbound Sterns Street to serve vehicles traveling from westbound Stearns Street to southbound Bellflower Boulevard. As shown in Table 10, the intersection would operate at LOS D during the p.m. peak hour with the implementation of this mitigation measure.

  According to field observations, limited right-of-way is available at the Bellflower Boulevard & Stearns Street intersection because of adjacent development. Therefore, providing an additional left-turn lane on westbound Stearns Street is likely not feasible. Consequently, this impact is considered to be **significant and unavoidable**.

- Bellflower Boulevard & 7th Street – This intersection is projected to operate at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour under cumulative base conditions. With buildout of the CSU Long Beach Master Plan, the intersection would degrade to LOS F conditions during the a.m. peak hour (V/C increase of 0.035) and would continue to operate at LOS F during the p.m. peak hour (V/C increase of 0.033). Therefore, this intersection would be **significantly impacted** under cumulative conditions.

  To mitigate the project impact, an additional left-turn lane could be provided on eastbound 7th Street to serve vehicles traveling from eastbound 7th Street to northbound Bellflower Boulevard. As shown in Table 10, the intersection would operate at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour (V/C increase of less than 0.02 during both peak hours) with the implementation of this mitigation measure.

TABLE 11
INTERSECTION LEVEL OF SERVICE ANALYSIS
CUMULATIVE (YEAR 2020) CONDITIONS WITH MITIGATION

Intersections	Peak Hour	WITHOUT PROJECT		WITH PROJECT		IMPACT		WITH PROJECT WITH MITIGATION		IMPACT	
		V/C or Average (Worst) Delay	LOS	V/C or Average (Worst) Delay	LOS	Increase in V/C	Significant Impact	V/C or Average (Worst)	LOS	Increase in V/C	Residual Impact
4. Bellflower Boulevard & Stearns Street	A.M. P.M.	0.788 0.886	C D	0.824 0.912	D E	0.036 0.026	NO YES	-- 0.860	-- D	-- -0.026	-- NO
7. Bellflower Boulevard & 7th Street	A.M. P.M.	0.997 1.066	E F	1.032 1.099	F F	0.035 0.033	YES YES	0.919 1.001	E F	-0.078 -0.065	NO NO
10. West Campus Road & 7th Street	A.M. P.M.	0.877 0.887	D D	0.909 0.903	E E	0.032 0.016	YES NO	0.796 --	C --	-0.081 --	NO --
13. Palo Verde Avenue & Atherton Street	A.M. P.M.	0.796 0.853	C D	0.843 0.904	D E	0.047 0.051	NO YES	-- 0.896	-- D	-- 0.043	-- NO
26. East Campus Road & 7th Street	A.M. P.M.	0.835 0.923	D E	0.873 0.944	D E	0.038 0.021	NO YES	-- 0.938	-- E	-- 0.015	-- NO

According to field observations, limited right-of-way is available at the Bellflower & 7th Street intersection due to adjacent development. Therefore, providing an additional left-turn lane on eastbound 7th Street is likely not feasible. Consequently, this impact is considered to be **significant and unavoidable**.

- West Campus Road & 7th Street – This intersection is projected to operate at LOS D during the a.m. peak hour under cumulative base conditions with buildout of the CSU Long Beach Master Plan and would degrade to LOS E during the a.m. peak hour (V/C increase of 0.032). Therefore, this intersection would be **significantly impacted** under cumulative conditions.

  To mitigate the project impact, an exclusive right-turn lane could be provided on westbound 7th Street to serve vehicles traveling from westbound 7th Street to northbound West Campus Road. As shown in Table 10, the intersection would operate at LOS C with the implementation of this mitigation measure.

  Widening 7th Street to provide the right-turn lane at the West Campus Road intersection could be accommodated by widening the roadway to the north within the CSU Long Beach campus right-of-way. This would require realigning the sidewalk on the north side of 7th Street and would eliminate a portion of landscaping on the southern edge of campus. Since this improvement could be constructed within CSU Long Beach right-of-way, the implementation of the recommended mitigation measure is considered feasible and would result in a **less-than-significant** impact.

- Palo Verde Avenue & Atherton Street – This intersection is projected to operate at LOS D during the p.m. peak hour under cumulative base conditions with buildout of the CSU Long Beach Master Plan and would degrade to LOS E during the p.m. peak hour (V/C increase of 0.051). Therefore, this intersection would be **significantly impacted** under cumulative conditions.

  To mitigate the project impact, the existing shared left-turn/through lane on eastbound Atherton Street could be converted to a separate left-turn lane and through lane. The resulting lane configurations on eastbound Atherton Street would be dual left-turn lanes, two through lanes and an exclusive right-turn lane, which would provide additional capacity for vehicles traveling from eastbound Atherton Street to northbound Palo Verde Avenue and for vehicles continuing eastbound on Atherton Street through the intersection. As shown in Table 10, the intersection would operate at LOS D with the implementation of this mitigation measure.

  Providing the recommended lane configurations on eastbound Atherton Street could be accommodated by restriping the roadway. According to field observations, the roadway could be restriped to contain dual left-turn lanes (10.5-foot lanes), two through lanes (12-foot lanes), and a right-turn lane (12.5-foot lane) within the 57.5-foot roadway width. Since this improvement could be constructed within the existing roadway width, the implementation of the recommended mitigation measure is considered feasible and would result in a **less-than-significant** impact.

- East Campus Road & 7th Street – This intersection is projected to operate at LOS E during the p.m. peak hour under cumulative base conditions with buildout of the CSU Long Beach Master Plan and would continue to operate at LOS E during the p.m. peak hour with an increase in V/C of greater than 0.02 (V/C increase of 0.021). Therefore, this intersection would be **significantly impacted** under cumulative conditions.

  To mitigate the project impact, the southbound right-turn/through lane on East Campus Road could be converted to a shared left/through/right-turn lane. The resulting lane configurations on southbound East Campus Road would be a left-turn lane and a shared left/through/right-turn lane. As shown in Table 10, the intersection would operate at LOS E with the implementation of this mitigation measure (V/C increase of less than 0.02).

  Providing the recommended lane configurations on southbound East Campus Road could be accommodated by restriping the roadway and would not require widening. Since this improvement could be constructed within the existing roadway width, the implementation of the recommended mitigation measure is considered feasible and would result in a **less-than-significant** impact.

V. CONGESTION MANAGEMENT PROGRAM ANALYSIS

Several analyses were conducted to comply with the Los Angeles County CMP requirements. The first section of this chapter presents a regional analysis to quantify potential impacts of the proposed project on the regional freeway system serving the project area including CMP freeway monitoring locations and CMP intersection monitoring stations in the Los Angeles Country CMP road network. The second section includes a transit analysis that quantifies the estimated transit demand and potential impacts of the proposed project on the regional transit system.

CMP SIGNIFICANT TRAFFIC IMPACT CRITERIA

The CMP guidelines indicate that if a proposed development project would add 150 or more trips in either direction to the mainline freeway monitoring location during either the morning or evening peak hour, then a CMP freeway analysis must be conducted. If a proposed project would add 50 or more peak hour trips (of adjacent street traffic) to a CMP arterial intersection, then a CMP arterial intersection analysis must be conducted.

For the purposes of a CMP traffic impact analysis, a project impact is considered to be significant if the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02), causing or worsening LOS F (V/C > 1.00). Under these criteria, a project would not be considered to have a regionally significant impact if the analyzed facility is operating at LOS E or better after the addition of project traffic, regardless of the increase in V/C ratio caused by the project. If the facility is operating at LOS F with project traffic and the incremental change in the V/C ratio caused by the project is 0.02 or greater, however, the project would be considered to have a significant impact.

2020 MASTER PLAN BUILDOUT CMP ARTERIAL INTERSECTION ANALYSIS

Three CMP arterial monitoring stations are within approximately two miles of the proposed project site:

1. Pacific Coast Highway & East 7th Street
2. Pacific Coast Highway & Ximeno Avenue
3. Pacific Coast Highway & Westminster Avenue

Pacific Coast Highway & East 7th Street and Pacific Coast Highway & Westminster Avenue are directly to the south and Pacific Coast Highway & Ximeno Avenue is west of the project site. Of 793 a.m. peak hour and 974 p.m. peak hour project trips generated by the 2020 Master Plan buildout, more than 50 would be traversing through the monitoring station at Pacific Coast Highway & East 7th Street. The proposed project is not expected to add enough new traffic to exceed the arterial analysis criteria of 50 vehicle trips at the other two locations. Therefore, CMP arterial analysis is only required at Pacific Coast Highway & East 7th Street.

The CMP arterial monitoring intersection identified for analysis was analyzed using the ICU analysis method in accordance with CMP Traffic Impact Analysis (TIA) requirements and the projected Year 2020 with ambient growth background traffic volumes developed in Chapter III. LOS definitions for the ICU method are presented in Table 2 and the results of the analysis are presented in Table 12.

As shown in Table 12, the proposed project would not create a significant regional impact at the analyzed CMP arterial monitoring intersection of Pacific Coast Highway & East 7th Street. The incremental impact resulting from the addition of project traffic is less than the 2% level required to create a significant impact.

CMP FREEWAY ANALYSIS

A regional analysis was conducted to quantify potential impacts of project traffic on the regional freeway system serving the project area, including segments of I-405, I-605 and the SR-22.

TABLE 12
CMP INTERSECTION LEVEL OF SERVICE ANALYSIS
YEAR 2020 CONDITIONS

Intersection	Peak Hour	EXISTING YEAR 2007		2020 WITHOUT PROJECT		2020 WITH PROJECT		IMPACT?	
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	Increase in V/C	Significant Impact
9. Pacific Coast Highway & 7th Street	A.M. P.M.	0.976 1.003	E F	1.068 1.100	F F	1.073 1.108	F F	0.005 0.008	NO NO

Given the regional nature of the university, the following ten freeway segments were selected for the freeway level of service analysis:

Interstate 405

- Between Seal Beach Boulevard and SR-22
- North of SR-22
- Between Studebaker Road and Palo Verde Avenue
- Between Palo Verde Avenue and Woodruff Avenue
- Between Woodruff Avenue and Bellflower Boulevard
- Between Bellflower Boulevard and Lakewood Avenue
- Between Lakewood Avenue and Cherry Avenue
- Between Cherry Avenue and Orange Avenue

Interstate 605

- North of Interstate 405

State Route 22

- East of Studebaker Road

Existing Freeway Traffic Volumes

Existing freeway mainline traffic volumes were obtained from *2006 Traffic Volumes on California State Highways* (California Department of Transportation, 2006) for the six selected freeway mainline CMP locations. Peak hour volumes by direction were derived by applying directional and peak hour factors derived from *2006 Traffic Volumes on California State Highways*, and freeway LOS was analyzed using the demand-to-capacity (D/C) methodology. Similar to the volume projections for the intersection analysis, a growth rate of 0.5% per year was applied to these traffic volumes to estimate 2007 existing base conditions for these freeway segments. The D/C

ratios were calculated for each freeway segment using a capacity value of 2,200 vehicles per hour per freeway mainline lane for freeway mixed-flow lanes according to *2000 Highway Capacity Manual* (Transportation Research Board, 2000). Freeway segment levels of service were determined based on V/C ratios and the definitions shown in Table 13. Table 14 indicates the estimated existing D/C ratios during the morning and afternoon peak hours at the CMP freeway monitoring locations. The analysis indicates that many of the study segments along I-405 currently operate at LOS E or F during the am and pm peak hours.

Future Freeway Traffic Volumes

The methodology used to develop forecasts of future year 2020 freeway volumes with and without the proposed project is similar to that used for the analyzed intersections. It includes the development of cumulative base (future without project) volumes, project traffic projections under the no project scenario and cumulative plus project (future with project) volumes.

The Year 2020 cumulative base freeway traffic volumes were developed by factoring the existing volumes (2007) by 6.5% (0.5% per year) to reflect cumulative growth. Table 13 lists the Year 2020 cumulative base peak hour traffic volumes for the analyzed freeway segments. The table also indicates the projected D/C ratio for each location under the cumulative base conditions in 2020. The trip distribution patterns illustrated in Figure 4 were used for this analysis to identify freeway locations at which the project could add considerable new trips.

The future traffic expected to be generated by the proposed project was then added to the Year 2020 cumulative base freeway traffic volumes. The resulting Year 2020 cumulative plus project traffic volumes for each development scenario is shown in Table 14 for the a.m. and p.m. peak hour, respectively.

Regional Freeway Impact Analysis

Table 14 indicates the projected D/C ratios for cumulative plus project conditions and the incremental increase in the D/C ratio that can be attributed to the proposed project. The significant impact criteria established by the CMP provide that a project would generate significant

TABLE 13
FREEWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

Level of Service	Demand/Capacity Ratio	Flow Conditions
A	0.00 – 0.35	Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed.
B	0.36 – 0.54	Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.
C	0.55 – 0.77	Stable traffic flow, but less freedom to select speed, change lanes or pass. Density increasing.
D	0.78 – 0.93	Approaching unstable flow. Speeds tolerable but subject to sudden and considerable variation. Less maneuverability and driver comfort.
E	0.94 – 1.00	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort.
F(0)	1.01 – 1.25	Forced traffic flow. Speed and flow may be greatly reduced with high densities.
F(1)	1.26 – 1.35	Forced traffic flow. Severe congested conditions prevail for more than one hour. Speed and flow may drop to zero with high densities.
F(2)	1.36 – 1.45	Forced traffic flow. Severe congested conditions prevail for more than one hour. Speed and flow may drop to zero with high densities.
F(3)	>1.45	Forced traffic flow. Severe congested conditions prevail for more than one hour. Speed and flow may drop to zero with high densities.

Source: Adapted from *2004 Congestion Management Program for Los Angeles County*
Los Angeles County Metropolitan Transportation Authority, June 2002.

TABLE 14
EXISTING AND FUTURE (2020) FREEWAY VOLUMES AND LEVELS OF SERVICE

CMP Monitoring Location	Peak Hour	Direction	Lanes	Capacity	Existing (2007) Conditions			2020 without Project Forecast			Project Only Peak Hour Trips	2020 with Project Forecast			Project Related D/C Change	Significant impact?
					Peak Hour Volume [a]	D/C Ratio	LOS	Peak Hour Volumes	D/C Ratio	LOS		Peak Hour Volumes	D/C Ratio	LOS		
I-405	A.M.	NB	7	13,700	12,109	0.884	D	12,896	0.941	E	127	13,023	0.951	E	0.009	NO
Between Seal Beach Blvd & SR-22		SB	7	13,700	13,799	1.007	F(0)	14,696	1.073	F(0)	32	14,728	1.075	F(0)	0.002	NO
	P.M.	NB	7	13,700	15,148	1.106	F(0)	16,133	1.178	F(0)	90	16,223	1.184	F(0)	0.007	NO
		SB	7	13,700	12,719	0.928	D	13,546	0.989	E	105	13,651	0.996	E	0.008	NO
I-405	A.M.	NB	5	9,300	9,164	0.985	E	9,759	1.049	F(0)	127	9,886	1.063	F(0)	0.014	NO
North of SR-22		SB	5	9,300	8,042	0.865	D	8,565	0.921	D	32	8,597	0.924	D	0.003	NO
	P.M.	NB	5	9,300	8,447	0.908	D	8,996	0.967	E	90	9,086	0.977	E	0.010	NO
		SB	5	9,300	10,060	1.082	F(0)	10,714	1.152	F(0)	105	10,819	1.163	F(0)	0.011	NO
I-405	A.M.	NB	5	9,300	9,447	1.016	F(0)	10,061	1.082	F(0)	127	10,188	1.095	F(0)	0.014	NO
Between Studebaker Rd & Palo Verde Ave		SB	5	9,300	8,290	0.891	D	8,829	0.949	E	32	8,861	0.953	E	0.003	NO
	P.M.	NB	5	9,300	8,707	0.936	E	9,273	0.997	E	90	9,363	1.007	F(0)	0.010	NO
		SB	5	9,300	10,372	1.115	F(0)	11,046	1.188	F(0)	105	11,151	1.199	F(0)	0.011	NO
I-405	A.M.	NB	5	9,300	9,199	0.989	E	9,797	1.053	F(0)	32	9,829	1.057	F(0)	0.003	NO
Between Palo Verde Ave & Woodruff Ave		SB	5	9,300	8,073	0.868	D	8,598	0.925	D	8	8,606	0.925	D	0.001	NO
	P.M.	NB	5	9,300	8,479	0.912	D	9,030	0.971	E	22	9,052	0.973	E	0.002	NO
		SB	5	9,300	10,099	1.086	F(0)	10,756	1.157	F(0)	26	10,782	1.159	F(0)	0.003	NO
I-405	A.M.	NB	5	9,300	8,166	0.878	D	8,696	0.935	E	24	8,720	0.938	E	0.003	NO
Between Woodruff Ave & Bellflower Blvd		SB	5	9,300	9,305	1.001	F(0)	9,910	1.066	F(0)	95	10,005	1.076	F(0)	0.010	NO
	P.M.	NB	5	9,300	10,216	1.098	F(0)	10,880	1.170	F(0)	67	10,947	1.177	F(0)	0.007	NO
		SB	5	9,300	8,577	0.922	D	9,134	0.982	E	67	9,201	0.989	E	0.007	NO
I-405	A.M.	NB	5	9,300	8,601	0.925	D	9,160	0.985	E	48	9,208	0.990	E	0.005	NO
Between Bellflower Blvd & Lakewood Ave		SB	5	9,300	9,801	1.054	F(0)	10,438	1.122	F(0)	190	10,628	1.143	F(0)	0.020	**YES**
	P.M.	SB	5	9,300	9,034	0.971	E	9,621	1.035	F(0)	135	9,756	1.049	F(0)	0.015	NO
		NB	5	9,300	10,760	1.157	F(0)	11,459	1.232	F(0)	158	11,617	1.249	F(0)	0.017	NO
I-405	A.M.	NB	5	9,300	9,005	0.968	E	9,590	1.031	F(0)	41	9,631	1.036	F(0)	0.004	NO
Between Lakewood Ave & Cherry Ave		SB	5	9,300	10,260	1.103	F(0)	10,927	1.175	F(0)	162	11,089	1.192	F(0)	0.017	NO
	P.M.	NB	5	9,300	11,264	1.211	F(0)	11,996	1.290	F(1)	134	12,130	1.304	F(1)	0.014	NO
		SB	5	9,300	9,458	1.017	F(0)	10,073	1.083	F(0)	115	10,188	1.095	F(0)	0.012	NO
I-405	A.M.	NB	5	9,300	9,284	0.998	E	9,888	1.063	F(0)	35	9,923	1.067	F(0)	0.004	NO
Between Cherry Ave and Orange Ave		SB	5	9,300	10,579	1.137	F(0)	11,266	1.211	F(0)	137	11,403	1.226	F(0)	0.015	NO
	P.M.	SB	5	9,300	9,752	1.049	F(0)	10,385	1.117	F(0)	98	10,483	1.127	F(0)	0.010	NO
		NB	5	9,300	11,614	1.249	F(0)	12,369	1.330	F(1)	114	12,483	1.342	F(1)	0.012	NO
I-605	A.M.	NB	6	11,500	6,422	0.558	C	6,839	0.595	C	32	6,871	0.597	C	0.003	NO
North of I-405		SB	4	8,800	7,295	0.829	D	7,769	0.883	D	127	7,896	0.897	D	0.014	NO
	P.M.	NB	6	11,500	7,756	0.674	C	8,260	0.718	C	105	8,365	0.727	C	0.009	NO
		SB	4	8,800	6,320	0.718	C	6,731	0.765	C	90	6,821	0.775	D	0.010	NO
SR-22	A.M.	EB	3	6,600	4,727	0.716	C	5,034	0.763	C	32	5,066	0.768	C	0.005	NO
East of Studebaker Rd		WB	3	6,600	3,812	0.578	C	4,060	0.615	C	127	4,187	0.634	C	0.019	NO
	P.M.	EB	3	6,600	3,566	0.540	C	3,798	0.575	C	105	3,903	0.591	C	0.016	NO
		WB	4	8,800	7,142	0.812	D	8,548	0.863	D	4	8,552	0.864	D	0.000	NO

Notes:

[a] Caltrans data - factored from 2006 to 2007 conditions

regional freeway impacts if the projected level of service is LOS F and the increase in D/C ratio caused by the project traffic is equal to or more than 0.02. As shown in the table, the proposed project is expected to generate a significant impact at Interstate 405 between Bellflower Boulevard and Lakewood Avenue (D/C increase of 0.02).

Implementation of additional freeway capacity to address significant cumulative conditions is beyond the ability of any individual project to implement and, as such, the project's incremental impacts on poor cumulative conditions on these segments would be considered significant and unavoidable.

REGIONAL TRANSIT IMPACT ANALYSIS

Section D.8.4 of the CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the number of vehicle trips. This methodology assumes an average vehicle ridership (AVR) of 1.4 to estimate the number of person trips to and from the project and then provides guidance regarding the percentage of person trips assigned to public transit depending on the type of use (commercial/other versus residential) and the proximity to transit services. The CMP guidelines do not specify a transit ridership projection for Universities. Based on transit usage at CSU Long Beach and the number of buses serving the University, it was assumed that an estimated 10% of person project trips may use public transit to travel to and from the site.

The proposed project is estimated to generate approximately 868 total a.m. peak hour trips and 1,049 total p.m. peak hour trips under Master Plan buildout conditions. After applying the CMP guidelines described above (i.e., converting the vehicle trips to person trips by multiplying by a 1.4 AVR and assuming 10% transit use), the results indicate that the project could add approximately 122 new transit person trips in the weekday a.m. peak hour and 147 new transit person trips in the weekday p.m. peak hour.

As discussed in Chapter II, the study area is served by approximately 10 bus lines. These lines will provide adequate transit service to the project. With the projected level of transit ridership increase (122 new transit person trips in the weekday a.m. peak hour and 147 new transit person trips in the weekday p.m. peak hour), the existing bus service can accommodate the

demand and project-related impacts on the regional transit system are not expected to be significant.

VI. PARKING AND INTERNAL CIRCULATION

The amount of parking proposed under the CSU Long Beach Master Plan and internal circulation on campus is discussed below.

PARKING

CSU Long Beach currently has approximately 13,400 parking spaces on campus. The majority of parking is provided in surface lots. The distribution of on-campus parking is summarized below.

- Existing Parking:
  - Surface Lots = 8,961 spaces
  - Temporary Lot (20) = 419 spaces
  - Parking Structure #1 = 2,727 spaces
  - Parking Structure #2 = 1,297 spaces
  - Total = 13,404 spaces

Three new parking structures are proposed in the CSU Long Beach Master Plan. The new parking structures are on Palo Verde Avenue south of Atherton Street (Structure #3, existing Lot 11), between Earl Warren Drive and Merriam Way south of Atherton Street (Structure #4, existing Lot 14A), and just west of East Campus Drive north of 7th Street (Structure #5, existing Lot 7). The proposed parking structures would provide a total of 3,831 parking spaces on campus as follows:

- Parking Structure #3 – 1,321 total spaces on Lot 11
- Parking Structure #4 – 1,150 total spaces on Lot 14A
- Parking Structure #5 – 1,360 total spaces on Lot 7

The new parking structures would replace existing surface parking lots on campus. As shown in Table 8, the proposed parking structures would provide a total of 3,381 parking spaces and eliminate 1,709 existing parking spaces, resulting in an increase of 2,122 parking spaces on

campus. Under Master Plan buildout conditions, a total of approximately 15,500 parking spaces would be provided on campus.

The number of FTE students under existing and Master Plan buildout conditions was compared to the amount of on-campus parking to determine if a sufficient parking supply was being provided with the proposed Master Plan. Table 15 summarizes the number of FTE students, the total amount of parking, and the ratio of students to parking spaces on campus under existing and Master Plan buildout conditions. As shown, CSU Long Beach currently has a ratio of two students per parking space and would maintain this ratio with buildout of the Master Plan.

INTERNAL CIRCULATION

The internal roadway system at CSU Long Beach is comprised of the following roadways:

- Merriam Way – Merriam Way extends south from Atherton Street to Beach Drive and provides access to surface parking lots and Parking Structure #1.
- Earl Warren Drive – Earl Warren Drive extends south from Atherton Street to Beach Drive and provides access to the surface parking lots in the north campus.
- Beach Drive – Beach Drive is a primary campus gateway providing access to/from Bellflower Boulevard at the western edge of campus and continuing east to connect with West Campus Road.
- West Campus Road – West Campus Road extends north from 7th Street to Beach Drive and serves as a primary internal circulation roadway.
- East Campus Road – East Campus Road extends north from 7th Street to State University Drive and is restricted to campus vehicles north of the surface parking lot adjacent to 7th Street.
- State University Drive – State University Drive is an eastern campus roadway providing access to the pick-up/drop-off area west of Palo Verde Avenue.

The primary internal circulation system at CSU Long Beach would remain in place with the implementation of the Master Plan. Access to the proposed parking structures would be provided by the existing internal roadway network. Traffic operations with the proposed parking structures and resulting changes to on-campus travel patterns were analyzed as part of the traffic impact analysis under near-term and buildout conditions. As shown in Figure 1, each

TABLE 15
CSULB MASTER PLAN
CAMPUS PARKING SUMMARY

CSULB Students/Parking	Existing Conditions	Master Plan Buildout Conditions
FTE Students	26,440	31,000
Total Parking Spaces	13,404	15,526
FTE Students/Parking Ratio	**2.0**	**2.0**

campus gateway and the primary internal intersections on campus were included as study intersections for the traffic impact analysis. Mitigation measures were recommended for campus gateway intersections impacted by the proposed Master Plan.

As part of the design process, a site-specific traffic impact assessment will be conducted for each of the proposed parking structures. The traffic impact assessment will ensure that the internal intersections providing access to the parking structure are designed to accommodate the projected peak hour traffic volumes when the structure is fully utilized.

REFERENCES

2000 Highway Capacity Manual, Transportation Research Board, 2000.

2004 Congestion Management Program for Los Angeles County, Los Angeles County Metropolitan Transportation Authority, 2004.

2006 Traffic Volumes on California State Highways, California Department of Transportation, 2006.

Highway Capacity Manual, Special Report 209, Transportation Research Board, 2000.

Proposed Capital Improvement Program Fiscal Year 2008, City of Long Beach, July 1, 2007.

Trip Generation, 7th Edition, Institute of Transportation Engineers, 2003.

Appendix C
Air Quality Worksheets

1/7/2008 11:06:14 AM

Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Temp\CSULB\Urbemis\CSULB 64930 trips.urb9

Project Name: CSULB 64830trips

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

1/7/2008 11:06:14 AM

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	16.08	23.53	21.35	0.04	0.04
TOTALS (lbs/day, mitigated)	16.08	23.53	21.35	0.04	0.04
Percent Reduction	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	918.77	922.55	8,385.67	988.32	192.86
TOTALS (lbs/day, mitigated)	587.52	461.28	4,192.83	494.16	96.43
Percent Reduction	36.05	50.00	50.00	50.00	50.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	934.85	946.08	8,407.02	988.36	192.90
TOTALS (lbs/day, mitigated)	32.16	47.06	42.70	0.08	0.08
Percent Reduction	96.56	95.03	99.49	99.99	99.96

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	PM10	PM2.5
Natural Gas	1.71	23.51	19.75	0.04	0.04
Hearth					
Landscape	0.13	0.02	1.60	0.00	0.00
Consumer Products	0.00				
Architectural Coatings	14.24				
TOTALS (lbs/day, unmitigated)	16.08	23.53	21.35	0.04	0.04

Area Source Changes to Defaults

1/7/2008 11:06:36 AM

Urbemis 2007 Version 9.2.2

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Temp\CSULB\Urbemis\CSULB 64930 trips.urb9

Project Name: CSULB 64830trips

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

1/7/2008 11:06:36 AM

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	15.95	23.51	19.75	0.04	0.04
TOTALS (lbs/day, mitigated)	15.95	23.51	19.75	0.04	0.04
Percent Reduction	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	870.50	1,118.77	8,168.34	988.32	192.86
TOTALS (lbs/day, mitigated)	490.14	559.39	4,084.17	494.16	96.43
Percent Reduction	43.69	50.00	50.00	50.00	50.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	886.45	1,142.28	8,188.09	988.36	192.90
TOTALS (lbs/day, mitigated)	31.90	47.02	39.50	0.08	0.08
Percent Reduction	96.40	95.88	99.52	99.99	99.96

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	PM10	PM2.5
Natural Gas	1.71	23.51	19.75	0.04	0.04
Hearth					
Landscaping - No Winter Emissions					
Consumer Products	0.00				
Architectural Coatings	14.24				
TOTALS (lbs/day, unmitigated)	15.95	23.51	19.75	0.04	0.04

Area Source Changes to Defaults

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Temp\CSULB\Urbemis\CSULB run 3.urb9

Project Name: CSULB Master Plan

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	2.88	4.08	5.01	0.01	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	64.98	57.25	551.16	187.40	36.45

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	67.86	61.33	556.17	187.41	36.46

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	PM10	PM2.5
Natural Gas	0.29	4.06	3.41	0.01	0.01
Hearth					
Landscape	0.13	0.02	1.60	0.00	0.00
Consumer Products	0.00				
Architectural Coatings	2.46				
TOTALS (lbs/day, unmitigated)	2.88	4.08	5.01	0.01	0.01

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 90%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	PM10	PM25
University/college (4 yrs)	64.98	57.25	551.16	187.40	36.45
TOTALS (lbs/day, unmitigated)	64.98	57.25	551.16	187.40	36.45

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 80 Season: Summer

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Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
University/college (4 yrs)		2.62	students	4,560.00	11,947.20	108,510.44
					11,947.20	108,510.44

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.0	0.0	100.0	0.0
Light Truck < 3750 lbs	5.0	0.0	98.5	1.5
Light Truck 3751-5750 lbs	21.0	0.0	100.0	0.0
Med Truck 5751-8500 lbs	17.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.4	41.7	58.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5

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Urbemis 2007 Version 9.2.2

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Temp\CSULB\Urbemis\CSULB run 3.urb9

Project Name: CSULB Master Plan

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	2.75	4.06	3.41	0.01	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	58.83	69.04	516.52	187.40	36.45

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	61.58	73.10	519.93	187.41	36.46

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	PM10	PM2.5
Natural Gas	0.29	4.06	3.41	0.01	0.01
Hearth					
Landscaping - No Winter Emissions					
Consumer Products	0.00				
Architectural Coatings	2.46				
TOTALS (lbs/day, unmitigated)	2.75	4.06	3.41	0.01	0.01

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 90%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	PM10	PM25
University/college (4 yrs)	58.83	69.04	516.52	187.40	36.45
TOTALS (lbs/day, unmitigated)	58.83	69.04	516.52	187.40	36.45

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 60 Season: Winter

1/7/2008 11:31:18 AM

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
University/college (4 yrs)		2.62	students	4,560.00	11,947.20	108,510.44
					11,947.20	108,510.44

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.0	0.0	100.0	0.0
Light Truck < 3750 lbs	5.0	0.0	98.5	1.5
Light Truck 3751-5750 lbs	21.0	0.0	100.0	0.0
Med Truck 5751-8500 lbs	17.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.4	41.7	58.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Temp\CSULB\Urbemis\CSULB Master Plan.urb9

Project Name: CSULB Master Plan

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5
Time Slice 3/3/2008-3/21/2008 Active Days: 15	**26.39**	**297.92**	**121.99**	**168.81**	**13.44**	**182.25**	**35.21**	**12.36**	**47.58**
Demolition 03/03/2008-03/21/2008	26.39	297.92	121.99	168.81	13.44	182.25	35.21	12.36	47.58
Fugitive Dust	0.00	0.00	0.00	168.00	0.00	168.00	34.94	0.00	34.94
Demo Off Road Diesel	9.99	92.05	31.55	0.00	4.14	4.14	0.00	3.81	3.81
Demo On Road Diesel	16.20	205.51	84.53	0.78	9.29	10.07	0.26	8.54	8.80
Demo Worker Trips	0.20	0.36	5.91	0.03	0.02	0.04	0.01	0.01	0.02

Time Slice 3/24/2008-6/20/2008 Active Days: 65	5.75	46.71	24.81	20.01	2.45	22.47	4.18	2.26	6.44
Mass Grading 03/24/2008-06/20/2008	5.75	46.71	24.81	20.01	2.45	22.47	4.18	2.26	6.44
Mass Grading Dust	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18
Mass Grading Off Road Diesel	5.63	46.01	22.40	0.00	2.42	2.42	0.00	2.23	2.23
Mass Grading On Road Diesel	0.04	0.57	0.23	0.00	0.03	0.03	0.00	0.02	0.02
Mass Grading Worker Trips	0.07	0.13	2.18	0.01	0.01	0.02	0.00	0.00	0.01
Time Slice 6/23/2008-8/1/2008 Active Days: 30	6.21	51.34	28.26	20.01	2.67	22.68	4.18	2.45	6.64
Fine Grading 06/23/2008-08/01/2008	6.21	51.34	28.26	20.01	2.67	22.68	4.18	2.45	6.64
Fine Grading Dust	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18
Fine Grading Off Road Diesel	6.04	49.97	25.57	0.00	2.61	2.61	0.00	2.40	2.40
Fine Grading On Road Diesel	0.10	1.23	0.51	0.00	0.06	0.06	0.00	0.05	0.05
Fine Grading Worker Trips	0.07	0.13	2.18	0.01	0.01	0.02	0.00	0.00	0.01
Time Slice 8/4/2008-8/15/2008 Active Days: 10	4.55	42.89	17.22	0.01	1.78	1.79	0.01	1.63	1.64
Trenching 08/04/2008-08/15/2008	4.55	42.89	17.22	0.01	1.78	1.79	0.01	1.63	1.64
Trenching Off Road Diesel	4.44	42.70	14.11	0.00	1.77	1.77	0.00	1.63	1.63
Trenching Worker Trips	0.10	0.19	3.11	0.01	0.01	0.02	0.01	0.01	0.01
Time Slice 8/18/2008-8/29/2008 Active Days: 10	6.34	36.24	22.49	0.02	3.08	3.11	0.01	2.84	2.84
Asphalt 08/18/2008-08/29/2008	6.34	36.24	22.49	0.02	3.08	3.11	0.01	2.84	2.84
Paving Off-Gas	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	5.85	34.68	18.21	0.00	3.01	3.01	0.00	2.77	2.77
Paving On Road Diesel	0.10	1.33	0.55	0.01	0.06	0.07	0.00	0.06	0.06
Paving Worker Trips	0.12	0.23	3.73	0.02	0.01	0.03	0.01	0.01	0.01

Time Slice 9/1/2008-12/31/2008 Active Days: 88	21.94	149.91	100.54	0.19	7.71	7.90	0.07	7.09	7.16
Building 09/01/2008-01/01/2009	21.94	149.91	100.54	0.19	7.71	7.90	0.07	7.09	7.16
Building Off Road Diesel	20.34	142.48	62.69	0.00	7.38	7.38	0.00	6.79	6.79
Building Vendor Trips	0.48	5.36	4.44	0.03	0.24	0.27	0.01	0.22	0.23
Building Worker Trips	1.12	2.06	33.42	0.16	0.09	0.24	0.06	0.07	0.13
Time Slice 1/1/2009-1/1/2009 Active Days: 1	20.77	141.22	96.07	0.19	7.33	7.52	0.07	6.74	6.80
Building 09/01/2008-01/01/2009	20.77	141.22	96.07	0.19	7.33	7.52	0.07	6.74	6.80
Building Off Road Diesel	19.30	134.29	60.75	0.00	7.02	7.02	0.00	6.46	6.46
Building Vendor Trips	0.45	5.04	4.13	0.03	0.22	0.25	0.01	0.20	0.21
Building Worker Trips	1.02	1.89	31.18	0.16	0.09	0.25	0.06	0.08	0.13

Phase Assumptions

Phase: Demolition 3/3/2008 - 3/21/2008 - Default Demolition Description

Building Volume Total (cubic feet): 4800000

Building Volume Daily (cubic feet): 400000

On Road Truck Travel (VMT): 5555.56

Off-Road Equipment:

2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Crawler Tractors (147 hp) operating at a 0.64 load factor for 8 hours per day

4 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

4 Other Material Handling Equipment (191 hp) operating at a 0.59 load factor for 8 hours per day

4 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 6/23/2008 - 8/1/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 5

Maximum Daily Acreage Disturbed: 1

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Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 33.33

Off-Road Equipment:

2 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 3/24/2008 - 6/20/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 5

Maximum Daily Acreage Disturbed: 1

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 15.38

Off-Road Equipment:

4 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 8/4/2008 - 8/15/2008 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

4 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 8/18/2008 - 8/29/2008 - Default Paving Description

Acres to be Paved: 1

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

2 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 9/1/2008 - 1/1/2009 - Default Building Construction Description

Off-Road Equipment:

2 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 8 hours per day

2 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day

2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

2 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 8 hours per day

2 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

2 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

2 Other Material Handling Equipment (191 hp) operating at a 0.59 load factor for 8 hours per day

2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day

2 Signal Boards (15 hp) operating at a 0.78 load factor for 8 hours per day

2 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

8 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

1/7/2008 11:16:32 AM

Urbemis 2007 Version 9.2.2

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Temp\CSULB\Urbemis\CSULB Master Plan.urb9

Project Name: CSULB Master Plan

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 3/3/2008-3/21/2008 Active Days: 15	**26.39**	**297.92**	**121.99**	**0.23**	**168.81**	**13.44**	**182.25**	**35.21**	**12.36**	**47.58**	**31,600.78**
Demolition 03/03/2008-03/21/2008	26.39	297.92	121.99	0.23	168.81	13.44	182.25	35.21	12.36	47.58	31,600.78
Fugitive Dust	0.00	0.00	0.00	0.00	168.00	0.00	168.00	34.94	0.00	34.94	0.00
Demo Off Road Diesel	9.99	92.05	31.55	0.00	0.00	4.14	4.14	0.00	3.81	3.81	7,462.98
Demo On Road Diesel	16.20	205.51	84.53	0.22	0.78	9.29	10.07	0.26	8.54	8.80	23,546.67
Demo Worker Trips	0.20	0.36	5.91	0.01	0.03	0.02	0.04	0.01	0.01	0.02	591.12

Time Slice 3/24/2008-6/20/2008 Active Days: 65	5.75	46.71	24.81	0.00	20.01	2.45	22.47	4.18	2.26	6.44	3,990.42
Mass Grading 03/24/2008-06/20/2008	5.75	46.71	24.81	0.00	20.01	2.45	22.47	4.18	2.26	6.44	3,990.42
Mass Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Mass Grading Off Road Diesel	5.63	46.01	22.40	0.00	0.00	2.42	2.42	0.00	2.23	2.23	3,707.43
Mass Grading On Road Diesel	0.04	0.57	0.23	0.00	0.00	0.03	0.03	0.00	0.02	0.02	65.21
Mass Grading Worker Trips	0.07	0.13	2.18	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.78
Time Slice 6/23/2008-8/1/2008 Active Days: 30	6.21	51.34	28.26	0.00	20.01	2.67	22.68	4.18	2.45	6.64	4,313.81
Fine Grading 06/23/2008-08/01/2008	6.21	51.34	28.26	0.00	20.01	2.67	22.68	4.18	2.45	6.64	4,313.81
Fine Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Fine Grading Off Road Diesel	6.04	49.97	25.57	0.00	0.00	2.61	2.61	0.00	2.40	2.40	3,954.75
Fine Grading On Road Diesel	0.10	1.23	0.51	0.00	0.00	0.06	0.06	0.00	0.05	0.05	141.28
Fine Grading Worker Trips	0.07	0.13	2.18	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.78
Time Slice 8/4/2008-8/15/2008 Active Days: 10	4.55	42.89	17.22	0.00	0.01	1.78	1.79	0.01	1.63	1.64	3,887.14
Trenching 08/04/2008-08/15/2008	4.55	42.89	17.22	0.00	0.01	1.78	1.79	0.01	1.63	1.64	3,887.14
Trenching Off Road Diesel	4.44	42.70	14.11	0.00	0.00	1.77	1.77	0.00	1.63	1.63	3,576.02
Trenching Worker Trips	0.10	0.19	3.11	0.00	0.01	0.01	0.02	0.01	0.01	0.01	311.12
Time Slice 8/18/2008-8/29/2008 Active Days: 10	6.34	36.24	22.49	0.01	0.02	3.08	3.11	0.01	2.84	2.84	2,975.26
Asphalt 08/18/2008-08/29/2008	6.34	36.24	22.49	0.01	0.02	3.08	3.11	0.01	2.84	2.84	2,975.26
Paving Off-Gas	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	5.85	34.68	18.21	0.00	0.00	3.01	3.01	0.00	2.77	2.77	2,449.78
Paving On Road Diesel	0.10	1.33	0.55	0.00	0.01	0.06	0.07	0.00	0.06	0.06	152.14
Paving Worker Trips	0.12	0.23	3.73	0.00	0.02	0.01	0.03	0.01	0.01	0.01	373.34

Time Slice 9/1/2008-12/31/2008 Active Days: 88	21.94	149.91	100.54	0.04	0.19	7.71	7.90	0.07	7.09	7.16	18,550.87
Building 09/01/2008-01/01/2009	21.94	149.91	100.54	0.04	0.19	7.71	7.90	0.07	7.09	7.16	18,550.87
Building Off Road Diesel	20.34	142.48	62.69	0.00	0.00	7.38	7.38	0.00	6.79	6.79	14,350.28
Building Vendor Trips	0.48	5.36	4.44	0.01	0.03	0.24	0.27	0.01	0.22	0.23	859.29
Building Worker Trips	1.12	2.06	33.42	0.03	0.16	0.09	0.24	0.06	0.07	0.13	3,341.31
Time Slice 1/1/2009-1/1/2009 Active Days: 1	20.77	141.22	96.07	0.04	0.19	7.33	7.52	0.07	6.74	6.80	18,549.30
Building 09/01/2008-01/01/2009	20.77	141.22	96.07	0.04	0.19	7.33	7.52	0.07	6.74	6.80	18,549.30
Building Off Road Diesel	19.30	134.29	60.75	0.00	0.00	7.02	7.02	0.00	6.46	6.46	14,350.28
Building Vendor Trips	0.45	5.04	4.13	0.01	0.03	0.22	0.25	0.01	0.20	0.21	859.37
Building Worker Trips	1.02	1.89	31.18	0.03	0.16	0.09	0.25	0.06	0.08	0.13	3,339.65

Phase Assumptions

Phase: Demolition 3/3/2008 - 3/21/2008 - Default Demolition Description

Building Volume Total (cubic feet): 4800000

Building Volume Daily (cubic feet): 400000

On Road Truck Travel (VMT): 5555.56

Off-Road Equipment:

2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Crawler Tractors (147 hp) operating at a 0.64 load factor for 8 hours per day

4 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

4 Other Material Handling Equipment (191 hp) operating at a 0.59 load factor for 8 hours per day

4 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 6/23/2008 - 8/1/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 5

Maximum Daily Acreage Disturbed: 1

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Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 33.33

Off-Road Equipment:

2 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 3/24/2008 - 6/20/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 5

Maximum Daily Acreage Disturbed: 1

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 15.38

Off-Road Equipment:

4 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 8/4/2008 - 8/15/2008 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

4 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 8/18/2008 - 8/29/2008 - Default Paving Description

Acres to be Paved: 1

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

2 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 9/1/2008 - 1/1/2009 - Default Building Construction Description

Off-Road Equipment:

2 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 8 hours per day

2 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day

2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

2 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 8 hours per day

2 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

2 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

2 Other Material Handling Equipment (191 hp) operating at a 0.59 load factor for 8 hours per day

2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day

2 Signal Boards (15 hp) operating at a 0.78 load factor for 8 hours per day

2 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

8 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

1/7/2008 10:43:09 AM

Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Temp\CSULB\Urbemis\CSULB Cumulative.urb9

Project Name: CSULB Master Plan - Cumulative

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

1/7/2008 10:43:09 AM

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	114.42	43.56	46.09	0.00	0.14	0.14
TOTALS (lbs/day, mitigated)	114.42	43.56	46.09	0.00	0.14	0.14
Percent Reduction	0.00	0.00	0.00	NaN	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	361.52	455.68	4,459.26	9.32	1,539.48	298.41
TOTALS (lbs/day, mitigated)	221.27	261.06	2,565.77	5.35	882.15	171.03
Percent Reduction	38.79	42.71	42.46	42.60	42.70	42.69

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	475.94	499.24	4,505.35	9.32	1,539.62	298.55
TOTALS (lbs/day, mitigated)	228.84	87.12	92.18	0.00	0.28	0.28
Percent Reduction	51.92	82.55	97.95	100.00	99.98	99.91

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	3.24	43.32	27.45	0.00	0.08	0.08
Hearth - No Summer Emissions						
Landscape	1.96	0.24	18.64	0.00	0.06	0.06
Consumer Products	109.22					
Architectural Coatings						
TOTALS (lbs/day, unmitigated)	114.42	43.56	46.09	0.00	0.14	0.14

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 50%

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	4.40	5.23	52.90	0.11	17.69	3.43
Condo/townhouse general	55.50	61.09	618.24	1.26	206.74	40.13
City park	0.14	0.12	1.12	0.00	0.39	0.08
Hotel	13.00	15.19	146.91	0.31	51.21	9.92
Free-standing discount store	19.48	25.83	249.14	0.53	87.02	16.86
Regnl shop. center	186.74	250.61	2,417.07	5.10	844.22	163.56
Supermarket	2.13	2.91	28.10	0.06	9.81	1.90
General office building	25.73	31.57	313.11	0.65	107.24	20.80
Medical office building	0.51	0.68	6.58	0.01	2.29	0.44
General light industry	53.89	62.45	626.09	1.29	212.87	41.29
TOTALS (lbs/day, unmitigated)	361.52	455.68	4,459.26	9.32	1,539.48	298.41
Less OnRoad Reduction	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS (lbs/day, unmitigated)	361.52	455.68	4,459.26	9.32	1,539.48	298.41

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	35.33	9.57	dwelling units	106.00	1,014.42	10,248.48
Condo/townhouse general	126.44	5.86	dwelling units	2,023.00	11,854.78	119,766.47
City park		2.27	acres	11.00	24.97	226.79
Hotel		8.17	rooms	400.00	3,268.00	29,681.61
Free-standing discount store		32.12	1000 sq ft	175.00	5,621.00	50,437.23
Regnl shop. center		42.94	1000 sq ft	1,270.00	54,533.80	489,331.75
Supermarket		102.24	1000 sq ft	6.20	633.89	5,687.88
General office building		11.01	1000 sq ft	554.60	6,106.15	62,145.30
Medical office building		36.25	1000 sq ft	4.00	145.00	1,327.55
General light industry		6.97	1000 sq ft	1,650.00	11,500.50	123,342.86
					94,702.51	892,195.92

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.0	0.0	100.0	0.0
Light Truck < 3750 lbs	6.6	0.0	98.5	1.5
Light Truck 3751-5750 lbs	23.1	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.3	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.4	41.7	58.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Hotel				5.0	2.5	92.5
Free-standing discount store				2.0	1.0	97.0
Regnl shop. center				2.0	1.0	97.0
Supermarket				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Medical office building				7.0	3.5	89.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
General light industry				50.0	25.0	25.0

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Urbemis 2007 Version 9.2.2

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Temp\CSULB\Urbemis\CSULB Cumulative.urb9

Project Name: CSULB Master Plan - Cumulative

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

1/7/2008 10:43:24 AM

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	112.81	49.35	30.02	0.04	0.57	0.56
TOTALS (lbs/day, mitigated)	112.81	49.35	30.02	0.04	0.57	0.56
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	394.40	548.97	4,170.88	7.70	1,539.48	298.41
TOTALS (lbs/day, mitigated)	233.08	314.53	2,398.76	4.41	882.15	171.03
Percent Reduction	40.90	42.71	42.49	42.73	42.70	42.69

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	507.21	598.32	4,200.90	7.74	1,540.05	298.97
TOTALS (lbs/day, mitigated)	225.62	98.70	60.04	0.08	1.14	1.12
Percent Reduction	55.52	83.50	98.57	98.97	99.93	99.63

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	3.24	43.32	27.45	0.00	0.08	0.08
Hearth	0.35	6.03	2.57	0.04	0.49	0.48
Landscaping - No Winter Emissions						
Consumer Products	109.22					
Architectural Coatings						
TOTALS (lbs/day, unmitigated)	112.81	49.35	30.02	0.04	0.57	0.56

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 50%

1/7/2008 10:43:24 AM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	4.68	6.30	49.31	0.09	17.69	3.43
Condo/townhouse general	56.70	73.64	576.29	1.04	206.74	40.13
City park	0.12	0.14	1.05	0.00	0.39	0.08
Hotel	13.59	18.29	137.75	0.26	51.21	9.92
Free-standing discount store	21.82	31.11	233.82	0.43	87.02	16.86
Regnl shop. center	210.57	301.80	2,268.51	4.21	844.22	163.56
Supermarket	2.43	3.51	26.37	0.05	9.81	1.90
General office building	27.67	38.05	291.23	0.54	107.24	20.80
Medical office building	0.57	0.82	6.17	0.01	2.29	0.44
General light industry	56.25	75.31	580.38	1.07	212.87	41.29
TOTALS (lbs/day, unmitigated)	394.40	548.97	4,170.88	7.70	1,539.48	298.41
Less OnRoad Reduction	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS (lbs/day, unmitigated)	394.40	548.97	4,170.88	7.70	1,539.48	298.41

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	35.33	9.57	dwelling units	106.00	1,014.42	10,248.48
Condo/townhouse general	126.44	5.86	dwelling units	2,023.00	11,854.78	119,766.47
City park		2.27	acres	11.00	24.97	226.79
Hotel		8.17	rooms	400.00	3,268.00	29,681.61
Free-standing discount store		32.12	1000 sq ft	175.00	5,621.00	50,437.23
Regnl shop. center		42.94	1000 sq ft	1,270.00	54,533.80	489,331.75
Supermarket		102.24	1000 sq ft	6.20	633.89	5,687.88
General office building		11.01	1000 sq ft	554.60	6,106.15	62,145.30
Medical office building		36.25	1000 sq ft	4.00	145.00	1,327.55
General light industry		6.97	1000 sq ft	1,650.00	11,500.50	123,342.86
					94,702.51	892,195.92

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.0	0.0	100.0	0.0
Light Truck < 3750 lbs	6.6	0.0	98.5	1.5
Light Truck 3751-5750 lbs	23.1	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.3	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.4	41.7	58.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Hotel				5.0	2.5	92.5
Free-standing discount store				2.0	1.0	97.0
Regnl shop. center				2.0	1.0	97.0
Supermarket				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Medical office building				7.0	3.5	89.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
General light industry				50.0	25.0	25.0

Appendix D
Noise Study

ENVIRONMENTAL NOISE STUDY FOR THE PROPOSED CALIFORNIA STATE UNIVERSITY, LONG BEACH CAMPUS MASTER PLAN REVISION

Project File 911-07
January 8, 2008

Prepared for:

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1 Introduction/Project Description

The purpose of this study is to identify and assess the potential acoustical impacts associated with the Master Plan Revision for California State University, Long Beach (CSULB) located within the City of Long Beach. Figure 1-1 identifies the location of the project site.

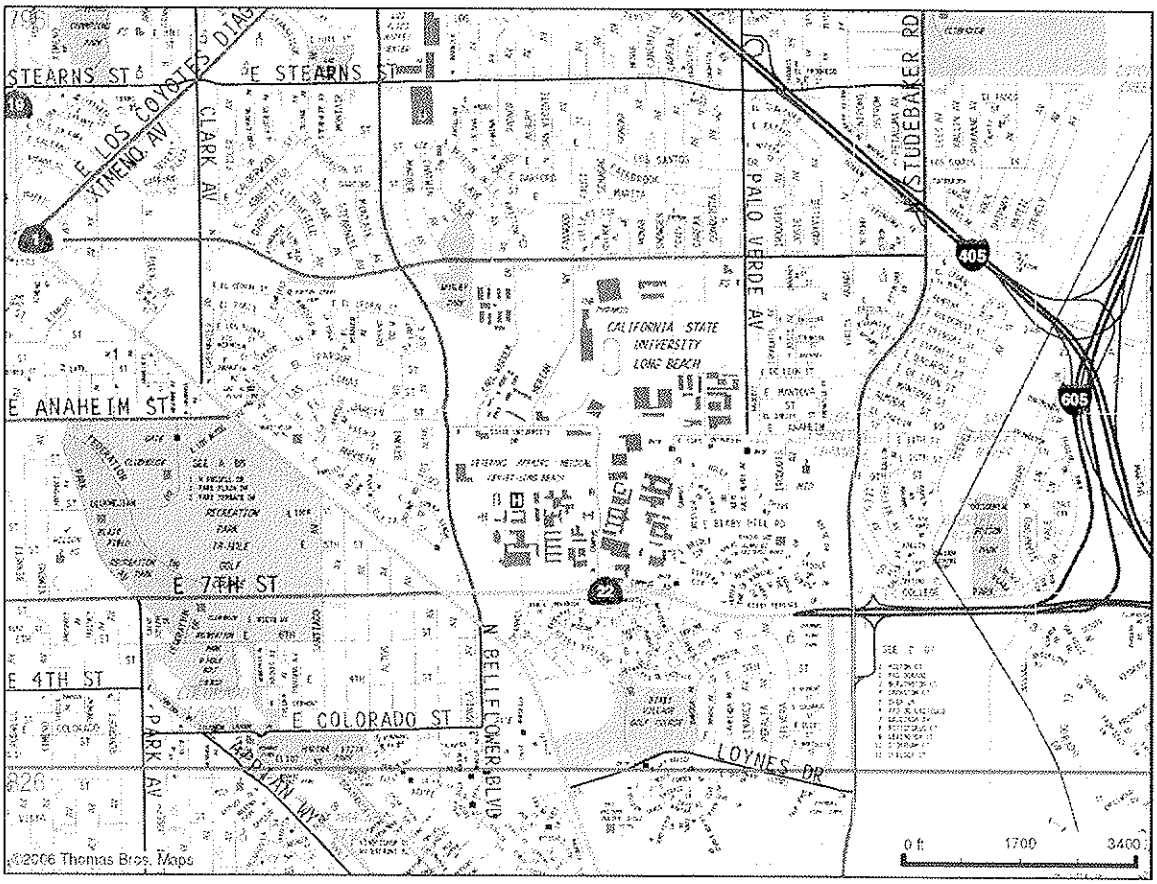


Figure 1-1. Project Study Area

The proposed Master Plan lays out the physical facilities to accommodate CSULB's strategic planning and Academic Plan. The approach of the Master Plan is to provide in-fill projects which will be constructed in the interior area of the campus, as well as reconstruction projects that will replace aged, obsolete, or inefficient facilities. Proposed improvements to the campus are listed as follows:

- Building 30, Liberal Arts Replacement Phase 1
- Building 31, Liberal Arts Replacement Phase 2
- Building 96, Parking Structure 4 (1,150 spaces),
- Building 97, Parking Structure 5 (1,360 spaces)

- Building 99, Liberal Arts Complex
- Building 100, Student Services Addition
- Building 101, Campus Housing Phase 1
- Building 102, Campus Housing Phase 2
- Building 103, Soccer Field and Sports Buildings

In addition, upgrades will be made to the utilities infrastructure to accommodate the new facilities. These upgrades include the following:

- Replacing, upsizing, and relocating water lines.
- Replace and relocate sewer lines.
- Replace and relocate storm drain pipes.
- Reconfiguration of, and repairs to, the reclaimed water networks.
- Provide additional heating capacity and thermal energy storage at the Central Plant.
- Replace piping in the natural gas distribution system.
- Upgrade the telecommunications infrastructure.

2 Noise Descriptors

The following sections briefly describe the noise descriptors that will be used throughout this study:

2.1 Decibels

Sound pressures can be measured in units called microPascals (μPa). However, expressing sound levels in terms of μPa would be very cumbersome since it would require a wide range of very large numbers. For this reason, sound pressure levels are described in logarithmic units of ratios of actual sound pressures to a reference pressure squared. These units are called bels. In order to provide a finer resolution, a bel is subdivided into 10 decibels, abbreviated dB.

Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB. In fact, they would combine to produce 73 dB. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by 3 dB. Conversely, halving the traffic volume or speed will reduce the traffic noise level by 3 dB.

2.2 A-Weighting

Sound pressure level alone is not a reliable indicator of loudness. The frequency or pitch of a sound also has a substantial effect on how humans will respond. While the intensity of the sound is a purely physical quantity, the loudness or human response depends on the characteristics of the human ear.

Human hearing is limited not only to the range of audible frequencies, but also in the way it perceives the sound pressure level in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and perceives both higher and lower frequency sounds of the same magnitude with less intensity. In order to approximate the frequency response of the human ear, a series of sound pressure level adjustments is usually applied to the sound measured by a sound level meter. The adjustments, or weighting network, are frequency dependent.

The A-scale approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. A range of noise levels associated with common in- and outdoor activities is shown in Figure 2-1.

The A-weighted sound level of traffic and other long-term noise-producing activities within and around a community varies considerably with time. Measurements of this varying noise level are accomplished by recording values of the A-weighted level during representative periods within a specified portion of the day.

2.3 Community Noise Equivalent Level (CNEL)

It is recognized that a given level of noise may be more or less tolerable depending on the duration of exposure experienced by an individual. There are numerous measures of noise exposure that consider not only the A-level variation of noise but also the duration of the disturbance. The State Department of Aeronautics and the California Commission on Housing and Community Development have adopted the community noise equivalent level (CNEL). This measure weights the average noise levels for the evening hours (7:00 p.m. to 10:00 p.m.), increasing them by 5 dB, and weights the late evening and morning hour noise levels (10:00 p.m. to 7:00 a.m.) by 10 dB. The daytime noise levels are combined with these weighted levels and are averaged to obtain a CNEL value. Figure 2-2 indicates the outdoor CNEL at typical locations.

2.4 Day-Night Sound Level (L_{dn})

The day-night sound level (L_{dn}), adopted by the United States Environmental Protection Agency (EPA), is similar to CNEL (see Section 2.3, above) because it takes into consideration not only the A-level variation of noise but also the duration of the disturbance and the time of day at which it occurs. The difference between CNEL and L_{dn} is that L_{dn} does not apply a weighting factor to the evening hours (7:00 p.m. to 10:00 p.m.). The L_{dn} metric weights the average noise levels for the late evening and morning hour noise levels (10:00 p.m. to 7:00 a.m.) by 10 dB. The daytime noise levels are

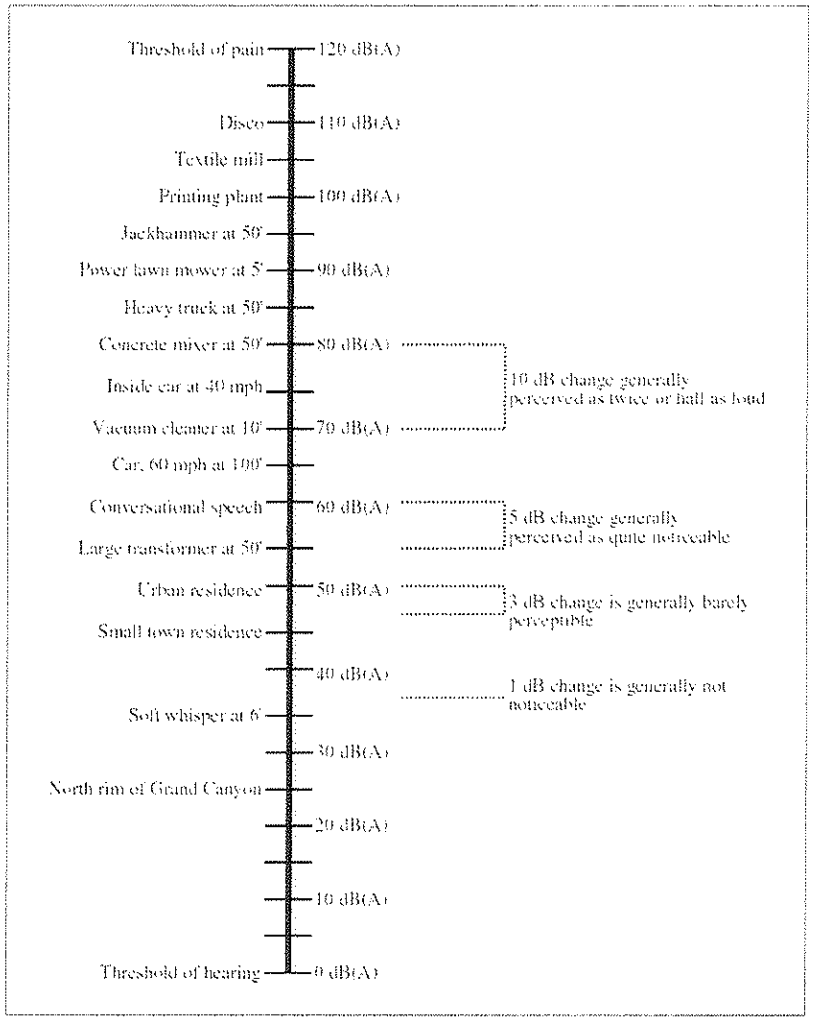


Figure 2-1. Common Noise Sources and A-Weighted Noise Levels

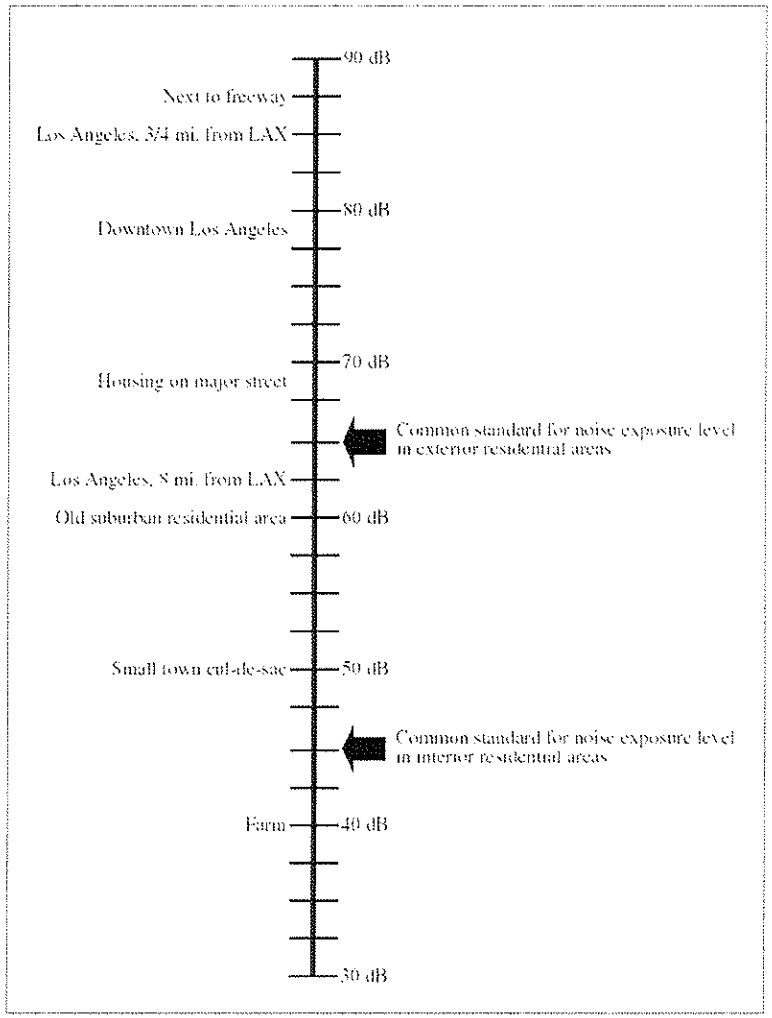


Figure 2-2. Common CNEL Noise Exposure Levels at Various Locations

combined with these weighted levels and are averaged to obtain an L_{dn} value. Figure 2-2 indicates the outdoor CNEL and L_{dn} at typical locations. For traffic noise in urban areas the CNEL and L_{dn} metrics are essentially identical (within ± 0.5 dB). Therefore, they will be used interchangeably throughout this report.

3 Noise Criteria

3.1 City of Long Beach Noise Ordinance Standards

The City of Long Beach Municipal Code identifies standards for noise intrusion from non-transportation sources within various Noise Districts. Referring to the Noise District Map provided in Section 8.80.160 of the municipal code, the study area is located in Noise District One. The following table summarizes the applicable standards for Noise District One:

Table 3-1. City of Long Beach Exterior Noise Ordinance Standards

Noise level that may not be exceeded for more than . . .	Daytime[a] 7 am - 10 pm	Nighttime[a] 10 pm - 7 am
30 minutes in any hour (denoted L_{50})	50 dB(A)	45 dB(A)
15 minutes in any hour (denoted L_{25})	55 dB(A)	50 dB(A)
5 minutes in any hour (denoted L_8)	60 dB(A)	55 dB(A)
1 minute in any hour (denoted L_2)	65 dB(A)	60 dB(A)
Any time (denoted L_{max})	70 dB(A)	65 dB(A)
Notes: a. In the event that the alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the specified noise limits are reduced by 5 dB(A)		

If the measured ambient noise level exceeds the permissible limit in any of the first four noise limit categories in Table 3-1, the standard shall be increased in 5 dB increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category in Table 3-1, the maximum allowable noise level shall be increased to reflect the maximum ambient noise level.

Noise from loudspeakers is regulated by Section 8.80.200.B of the noise ordinance. This regulation prohibits the use of loudspeakers, loudspeaker systems, or similar devices between 10:00 p.m. and 7:00 a.m. of the following day such that the sound creates a noise disturbance across a residential real property line, or at any time violates the City's exterior or interior noise limits, except for any noncommercial public speaking, public assembly or other activity for which a variance has been issued by the City.

Noise from construction activities at projects requiring a building or other related permit is regulated by Section 8.80.202 of the noise ordinance. These regulations limit the permissible hours of construction to between 7:00 a.m. and 7:00 p.m. on weekdays or federal holidays, and between 9:00

a.m. and 6:00 p.m. on Saturdays. Construction is generally prohibited on Sundays (except for work authorized by permit issued by the noise control officer).

In Section 8.80.280 of the noise ordinance the City exempts occasional outdoor or indoor gatherings, public dances, shows and sporting and entertainment events, provided the events are conducted pursuant to a permit or license or other entitlement issued by the City relative to the staging of the events.

The noise ordinance also provides standards for vibration. It is a violation of the noise ordinance to operate or permit the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source. The "vibration perception threshold" is defined as the minimum groundborne vibration necessary to cause a normal person to be aware of the vibration by means such as feeling the vibration or observing the vibration-induced motion of other objects.

3.2 City of Long Beach General Plan

The Noise Element of the City of Long Beach General Plan identifies the following standards for transportation noise sources:

Table 3-2. City of Long Beach Noise Element Standards

Major Land Uses Type	Exterior			Interior
	Maximum Single Hourly Peak	L_{10}[a]	L_{50}[b]	L_{dn}
All noise-sensitive land uses (residential, school, hospital, etc.) 7:00 a.m. - 10:00 p.m.	70 dB(A)	55 dB(A)	45 dB(A)	45 dB
All noise-sensitive land uses (residential, school, hospital, etc.) 10:00 p.m. - 7:00 a.m.	60 dB(A)	45 dB(A)	35 dB(A)	35 dB
Commercial (anytime)	75 dB(A)	65 dB(A)	55 dB(A)	N/A
Industrial (anytime)	85 dB(A)	70 dB(A)	60 dB(A)	N/A

Notes:
a. Noise levels exceeded 10% of the time
b. Noise levels exceeded 50% of the time

It is noted that the peak, L_{10} and L_{50} standards identified in the Noise Element are not consistent with those identified in the City's Noise Ordinance (refer to Section 3.1). Also, the L_{dn}, as described in Section 2.4, is a metric based on noise levels throughout a complete 24-hour period. Therefore, it is not appropriate to specify a different L_{dn} standard for the daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) periods.

3.3 State of California Office of Planning and Research

The State Office of Planning and Research (OPR) Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The OPR Guidelines contain a land use compatibility table that describes the compatibility of different land uses with a range of environmental noise levels in terms of CNEL. A noise environment of up to 70 dB CNEL is considered to be conditionally acceptable[1] for residential, school, and park uses according to those Guidelines. At office buildings, business, commercial and professional land uses, a CNEL of up to 77.5 dB is considered to be conditionally acceptable. For industrial land uses, a CNEL of up to 80 dB is considered conditionally acceptable.

3.4 State of California Noise Insulation Standards

The Noise Insulation Standards (Title 24 of the California Code of Regulations) states that the "interior community noise equivalent level (CNEL) attributable to exterior sources shall not exceed an annual CNEL of 45 dB in any habitable room." Additionally, the standards specify that multifamily residential buildings or structures to be located within exterior CNEL contours of 60 dB or greater of an existing or adopted freeway, expressway, parkway, major street, thoroughfare, railroad, rapid transit line, or industrial noise source shall require an acoustical analysis showing that the building has been designed to limit intruding noise to the level prescribed (interior CNEL of 45 dB). In addition, the State standards set minimum ratings for the sound and impact transmission of common wall and floor/ceiling separation assemblies between living units, or between a living unit and a common interior space.

4 Thresholds of Significance

Based on the noise criteria discussed above, and the CEQA guidelines, a significant impact will be assessed if any of the following conditions occur:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. For the proposed project, this condition will occur if:
  - The exterior CNEL exceeds 70 dB at any proposed school building or facility.
  - The interior CNEL exceeds 45 dB within the interior of any proposed school building.
  - The noise level due to project-generated traffic increases the CNEL from below 70 dB to above 70 dB at any existing residential property, school, or park; or from below 77.5 dB to

[1] *Conditionally Acceptable* (as defined by the State of California Office of Planning and Research): New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

above 77.5 dB at any existing office, business, commercial or professional land use; or from below 80 dB to above 80 dB at any existing industrial land use.

- The noise level due to operation of the project exceeds the City of Long Beach Noise Ordinance standards.

- Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. This condition will occur if the proposed project permanently increases the ambient noise level by 5 dB(A) or more.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. This condition will occur if the proposed project temporarily increases the ambient noise level by 5 dB(A) or more.
- Exposure of persons residing or working in the project area to excessive noise levels as a result of activities at Long Beach Municipal Airport.

5 Existing Noise Environment

Traffic on the local streets is the predominant source of noise that currently affects the study area. The following sections discuss the noise measurements and analyses that were conducted to identify the existing traffic noise levels in the study area.

5.1 Noise Measurements

In order to document the existing noise environment, measurements were obtained at five locations within the study area. (Refer to Figure 5-1.) At four of the locations the measurement was obtained for a period of about 20 minutes. At the fifth location the measurement was obtained over a continuous 24-hour period. All noise measurements were conducted with a microphone positioned at a height of 5 feet above the ground. The results of the noise measurements, provided in Appendix I, are summarized in Table 5-1.

The instrumentation used to obtain the noise measurements consisted of integrating sound level meters (Models 712 and 820) and acoustical calibrators (Models CAL200 and CAL250) manufactured by Larson Davis Laboratories. The accuracy of the calibrator is maintained through a program established by the manufacturer, and is traceable to the National Bureau of Standards. All instrumentation meets the requirements of the American National Standards Institute (ANSI) S1.4-1971.

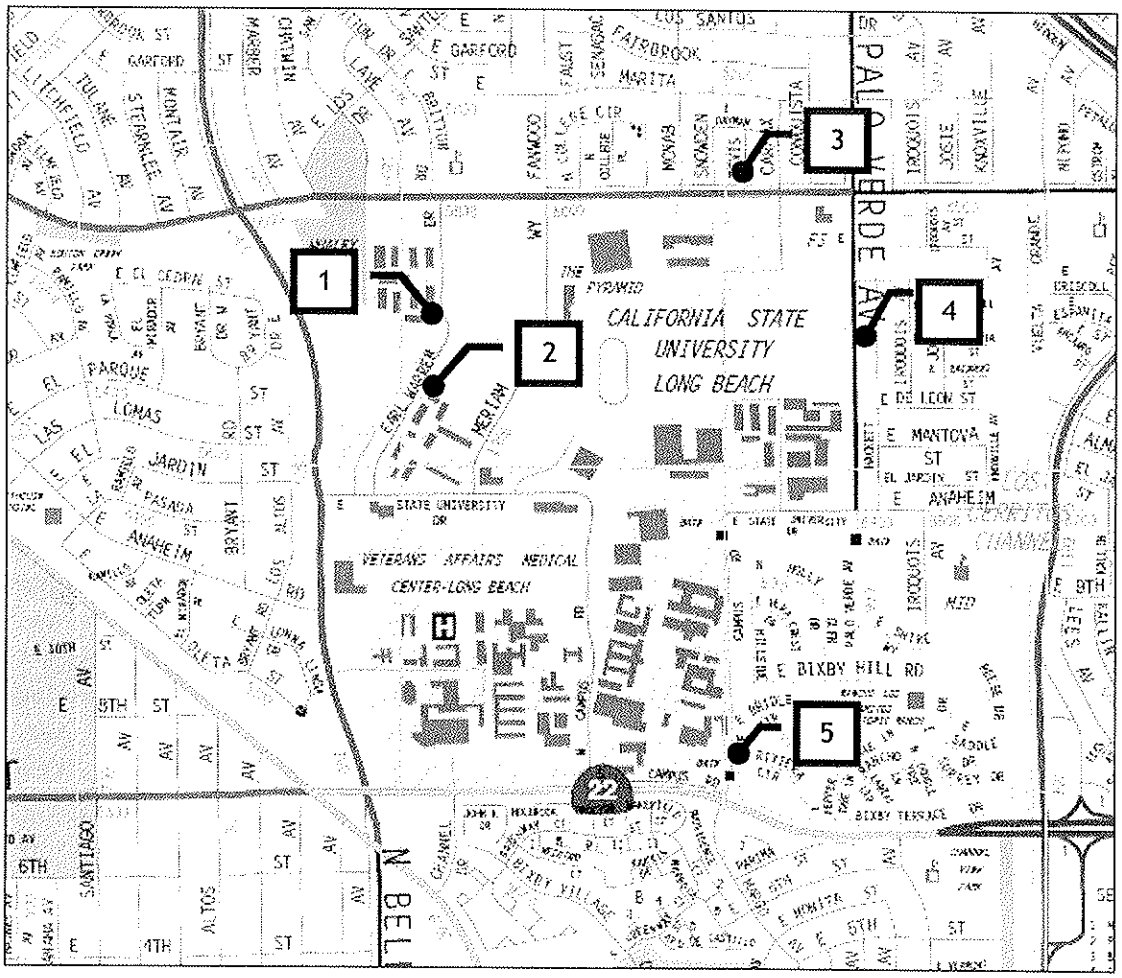


Figure 5-1. Noise Measurement Locations

Table 5-1. Summary of Noise Measurements

Location #	Location Description	Measured Noise Levels, dB(A)					
		L_{50}	L_{25}	L_8	L_2	L_{max}	CNEL
1	Adjacent to existing student housing on Earl Warren Dr.	55.7	58.2	60.9	63.3	70.3	N/A
2	Adjacent to existing student housing on Earl Warren Dr.	50.4	52.3	54.6	56.3	62.7	N/A
3	In front of 1800 Tevis Ave.	61.5	63.8	66.1	69.0	74.8	N/A
4	Rear yard of 1531 Hackett Ave.	53.5 - 57.6	56.7 - 60.6	60.0 - 63.5	63.9 - 68.5	71.8 - 84.3	61.4
5	NW corner of Riviera Circle, adjacent to #6201	53.4	54.9	56.7	59.4	65.5	N/A

In reviewing the measurement results of Table 5-1, it can be seen that the measured existing ambient noise levels are generally higher than the City's noise ordinance standards. In accordance with City code, therefore, the noise ordinance standards may be adjusted to encompass the existing ambient, as indicated in the following table.

Table 5-2. Adjusted City of Long Beach Exterior Noise Ordinance Standards

Noise level that may not be exceeded for more than . . .	Daytime[a] (7 am - 10 pm), dB(A)				
	Location #1	Location #2	Location #3	Location #4	Location #5
30 minutes in any hour (denoted L_{50})	60	55	65	55-60	55
15 minutes in any hour (denoted L_{25})	60	55	65	60-65	55
5 minutes in any hour (denoted L_8)	65	60	70	60-65	60
1 minute in any hour (denoted L_2)	65	65	70	65-70	65
Any time (denoted L_{max})	70.3	70	74.8	71.8-84.3	70

Notes:
a. In the event that the alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the specified noise limits are reduced by 5 dB(A)

5.2 Traffic Noise Exposures

The results of the noise measurements were used to calibrate a proprietary version of the highway traffic noise prediction model developed by the Federal Highway Administration (as described in report FHWA-RD-77-108). The model was used to estimate existing traffic noise levels adjacent to various segments of street in the study area based on traffic volumes, speeds, truck mix, site conditions, and distance from the roadway to the receptor. The California reference energy mean emission (Calveno) levels developed by Caltrans were used in the prediction model. The results of the modeling effort, provided in Appendix II, are summarized in Table 5-3.

Table 5-3. Existing Traffic Noise Levels

Arterial / Reach	Avg. Daily Traffic	Unmitigated CNEL @ 50'	Dist. to CNEL Contour		
			60dB	65dB	70dB
2ND STREET					
West of Pacific Coast Hwy	43,320	73.5	490	235	100
East of Pacific Coast Hwy	39,790	70.0	300	130	50
7TH STREET					
West of Pacific Coast Hwy	38,960	72.0	395	185	75
East of Pacific Coast Hwy	45,050	72.5	428	200	83
West of Bellflower Bl	44,550	72.5	428	200	83
East of Bellflower Bl	46,540	73.0	460	215	90
West of W Campus Dr	49,630	73.0	460	215	90
East of W Campus Dr	52,320	73.5	490	235	100
West of E Campus Dr	52,060	73.5	490	235	100
East of E Campus Dr	53,130	74.5	560	278	120
ANAHEIM ROAD					
East of Palo Verde Av	10,450	61.5	69	---	---
West of Studebaker Rd	8,380	60.5	56	---	---
East of Studebaker Rd	2,610	56.0	---	---	---
ATHERTON STREET					
West of Bellflower Bl	16,730	67.5	200	83	---
East of Bellflower Bl	21,130	68.5	235	100	---
West of Earl Warren Dr	20,620	68.5	235	100	---
East of Earl Warren Dr	21,460	68.5	235	100	---
West of Merriam Wy	23,370	69.0	255	110	---
East of Merriam Wy	24,030	69.0	255	110	---
West of Palo Verde Av	20,950	68.5	235	100	---
East of Palo Verde Av	12,460	66.0	155	62	---
West of Studerbaker Rd	8,730	64.5	120	---	---
East of Studerbaker Rd	1,330	58.0	---	---	---
BEACH DRIVE					
East of Bellflower Bl	10,630	61.5	69	---	---
West of Earl Warren Dr	10,560	61.5	69	---	---
East of Earl Warren Dr	7,630	60.0	50	---	---
West of Merriam Wy	6,770	59.5	---	---	---
East of Merriam Wy	7,350	56.0	---	---	---

Table 5-3, cont. Existing Traffic Noise Levels

Arterial / Reach	Avg. Daily Traffic	Unmitigated CNEL @ 50'	Dist. to CNEL Contour		
			60dB	65dB	70dB
BELLFLOWER BOULEVARD					
North of I-405 NB Ramps	28,920	70.0	300	130	50
South of I-405 NB Ramps	35,550	70.5	320	143	56
North of Los Coyotes Diagonal	32,990	70.5	320	143	56
South of Los Coyotes Diagonal	39,840	70.0	300	130	50
North of Stearns St	32,630	69.0	255	110	---
South of Stearns St	35,540	69.5	278	120	---
North of Atherton St	30,740	69.0	255	110	---
South of Atherton St	29,580	70.0	300	130	50
North of Beach Dr	28,280	69.5	278	120	---
South of Beach Dr	29,350	70.0	300	130	50
North of 7th Street	29,010	70.0	300	130	50
South of 7th Street	16,680	67.5	200	83	---
North of Pacific Coast Hwy	16,300	67.5	200	83	---
South of Pacific Coast Hwy	9,190	64.0	110	---	---
EARL WARREN DRIVE					
South of Atherton St	2,720	56.0	---	---	---
North of Beach Dr	4,610	58.0	---	---	---
EAST CAMPUS ROAD					
North of 7th St	2,660	57.0	---	---	---
FANWOOD AVENUE					
North of Atherton St	880	53.0	---	---	---
LOS COYOTES DIAGONAL					
West of I-405 SB Off-Ramp	22,630	68.5	235	100	---
East of I-405 SB Off-Ramp	31,400	70.0	300	130	50
West of Bellflower Bl	31,220	70.0	300	130	50
East of Bellflower Bl	26,490	69.5	278	120	---
MARGO AVENUE					
South of 7th St	1,850	55.5	---	---	---
MERRIAM WAY					
South of Atherton St	18,260	63.5	100	---	---
North of Beach Dr	5,270	57.5	---	---	---

Table 5-3, cont. Existing Traffic Noise Levels

Arterial / Reach	Avg. Daily Traffic	Unmitigated CNEL @ 50'	Dist. to CNEL Contour		
			60dB	65dB	70dB
PACIFIC COAST HIGHWAY					
North of 7th Street	31,480	71.0	340	155	62
South of 7th Street	25,170	70.0	300	130	50
West of Bellflower Bl	24,070	70.0	300	130	50
East of Bellflower Bl	33,870	71.5	368	170	69
North of 2nd Street	40,780	73.5	490	235	100
South of 2nd Street	40,040	73.5	490	235	100
PALO VERDE AVENUE					
North of I-405 NB Ramps	16,500	66.0	155	62	---
South of I-405 NB Ramps	22,740	67.5	200	83	---
North of Woodruff Av	19,920	67.0	185	75	---
South of Woodruff Av	24,860	68.0	215	90	---
North of Stearns St	24,120	68.0	215	90	---
South of Stearns St	22,460	67.5	200	83	---
North of Atherton St	24,540	68.0	215	90	---
South of Atherton St	17,410	66.5	170	69	---
North of Rendina St	18,470	66.5	170	69	---
South of Rendina St	14,400	65.5	143	56	---
North of Parking Structure	14,340	65.5	143	56	---
South of Parking Structure	13,880	65.5	143	56	---
North of Anaheim Rd	14,440	65.5	143	56	---
South of Anaheim Rd	2,520	57.0	---	---	---
RENDINA STREET					
East of Palo Verde Av	1,300	54.5	---	---	---
STATE UNIVERSITY DRIVE					
E Campus Rd to Palo Verde Av	6,010	60.0	50	---	---
STEARNS STREET					
West of Bellflower Bl	13,150	65.0	130	50	---
East of Bellflower Bl	16,720	66.0	155	62	---
West of Palo Verde Av	12,640	65.0	130	50	---
East of Palo Verde Av	14,300	65.5	143	56	---

Table 5-3, cont. Existing Traffic Noise Levels

Arterial / Reach	Avg. Daily Traffic	Unmitigated CNEL @ 50'	Dist. to CNEL Contour		
			60dB	65dB	70dB
STUDEBAKER ROAD					
North of I-405 NB On-Ramp	19,320	68.0	215	90	---
South of I-405 NB On-Ramp	20,510	68.5	235	100	---
North of I-405 SB Off-Ramp	20,510	68.5	235	100	---
South of I-405 SB Off-Ramp	21,980	68.5	235	100	---
North of Atherton St	22,230	68.5	235	100	---
South of Atherton St	20,990	68.5	235	100	---
North of Anaheim Rd	19,920	68.0	215	90	---
South of Anaheim Rd	25,370	70.0	300	130	50
North of SR 22 WB Ramps	24,120	70.0	300	130	50
South of SR 22 WB Ramps	31,800	71.0	340	155	62
North of SR 22 EB Ramps	31,690	71.0	340	155	62
South of SR 22 EB Ramps	37,480	72.0	395	185	75
WEST CAMPUS ROAD					
North of 7th St	7,230	59.0	---	---	---
WOODRUFF AVENUE					
West of Palo Verde Av	7,840	64.5	120	---	---

5.3 Long Beach Airport

Long Beach Airport, located northwest of the project site, serves nearly three million commercial airline passengers annually, and is among the top five busiest general aviation airports in the world, with 340,000 annual general aviation operations. It is also a center for air cargo carriers that transport more than 49,000 tons of goods each year. Referring to Figure 5-2, the CSULB campus is located well outside the 65 dB CNEL contour generated by flight activities at the airport.

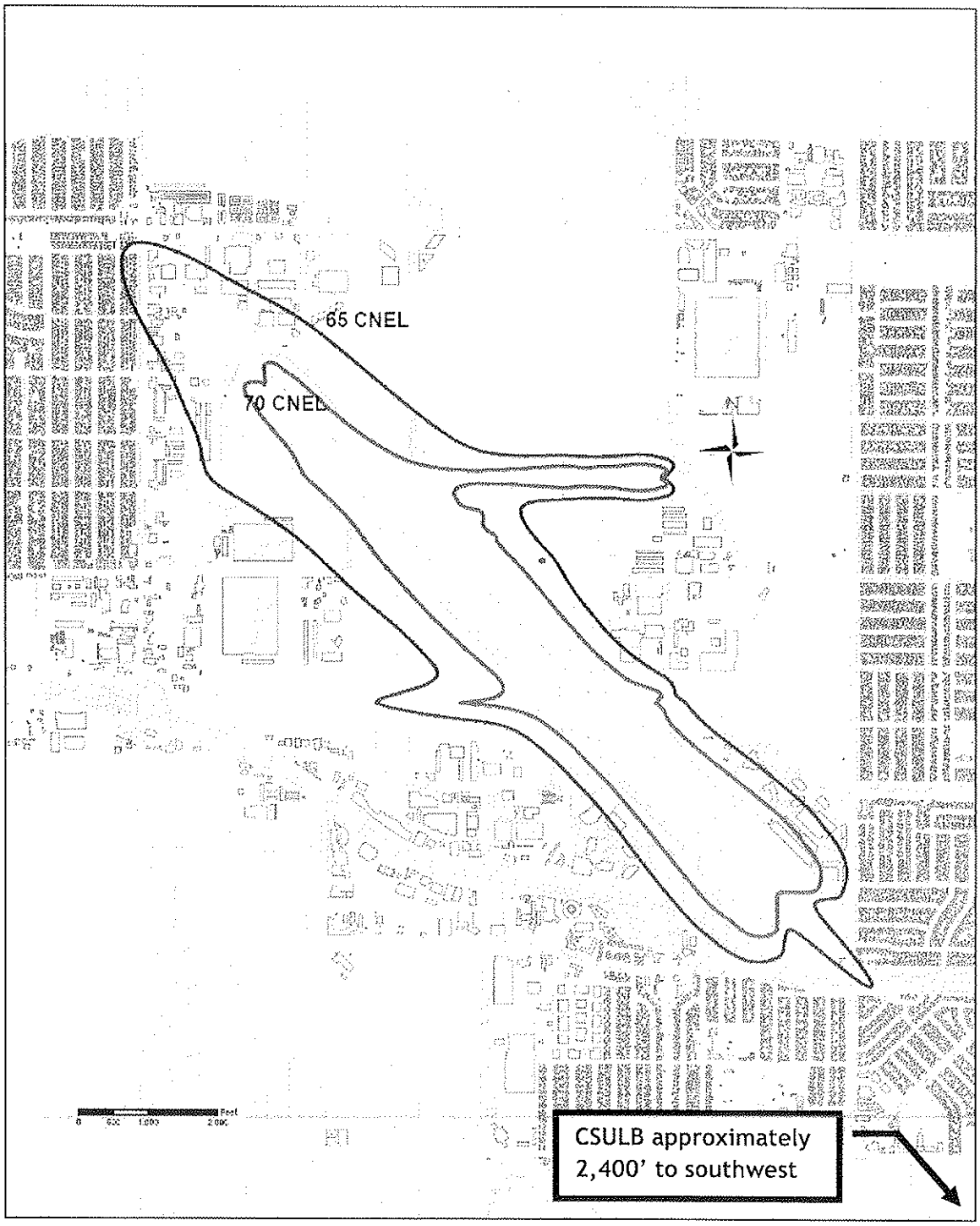


Figure 5-2. Second Quarter 2007 Noise Contours
(Source: Long Beach Airport)

6 Future-with-Project Noise Environment at Off-Site Locations

For ease of presentation, the discussion of future-with-project conditions at off-site locations has been divided into two sections: construction and operation. Each is discussed in greater detail in the following sections.

6.1 Construction

The construction of the proposed improvements will require various demolition, grading, and construction activities. Construction of the project will occur only between 7:00 a.m. and 7:00 p.m. on weekdays, and between 9:00 a.m. and 6:00 p.m. on Saturdays. There will be no construction activities on Sundays or federal holidays.

Construction noise levels in the vicinity of the project will fluctuate depending on the particular type, number and duration of use of various pieces of construction equipment. The exposure of persons to the periodic increase in noise levels will be short-term. Table 6-1 shows typical noise levels associated with various types of construction-related machinery.

Table 6-1. Construction Equipment Noise Levels

Equipment Type	Typical Average Equipment Noise Level at 50 ft. in dB(A)[a]
Air Compressor	75
Backhoe	75
Concrete Mixer	75
Concrete Pump	75
Dozer	75
Front Loader	75
Generator	75
Grader	75
Paver	80
Saw	75
Tractor	75
Truck	75

Source: U.S. Environmental Protection Agency (Reference 5).

Notes:
a. Equipment levels with feasible noise control: using quieter procedures or machines and implementing noise control features requiring no major redesign or extreme cost.

The nearest construction to the project boundaries will occur at the new student housing (Building 101) adjacent to Atherton Street, at the new student housing (Building 102) adjacent to the west property line of the campus, at the new liberal arts complex (Building 99) adjacent to W. Campus Road, and at the new parking structure 5 (Building 97) located near the southwest corner of the campus. Since the exact construction schedule, number and type of equipment to be used, and

duration of use are not known at this time, the analysis of construction noise is based on the noisiest equipment item that will likely be used in the construction. Table 6-2 provides an analysis of estimated construction noise levels that will be experienced at the nearest receptors.

Table 6-2. Analysis of Estimated Construction Noise Levels

Construction Area	Estimated Avg. Level @ 50', dB(A)[a]	Attenuation Due to Distance[b]	Usage Factor	Attenuation Due to Usage Factor	Attenuation for 6 Hours of Use Per 8-Hour Work Day	Average Hourly Daytime Level, dB(A)
Student Housing (Building 101)	75 dB(A)	-10 dB(A) (150')	0.4	-4 dB(A)	-1 dB(A)	60 dB(A)
Student Housing (Building 102)	75 dB(A)	-4 dB(A) (75')	0.4	-4 dB(A)	-1 dB(A)	66 dB(A)
Liberal Arts Complex (Bldg. 99)	75 dB(A)	-9 dB(A) (140')	0.4	-4 dB(A)	-1 dB(A)	61 dB(A)
Parking Structure 5 (Building 97)	75 dB(A)	-2 dB(A) (65')	0.4	-4 dB(A)	-1 dB(A)	68 dB(A)

Notes:
a. Equipment levels with feasible noise control: using quieter procedures or machines and implementing noise control features requiring no major redesign or extreme cost.
b. Based on a reduction of 6 dB per doubling of distance.

Table 6-3 compares the above noise levels to the estimated existing ambient noise levels at the neighboring properties (as provided in Table 5-1 and estimated from Table 5-2).

Table 6-3. Comparison of Estimated Construction Noise Levels with Existing Ambient

Receiver Location	Average Hourly Daytime Level Due to Construction Activities, dB(A)	Existing Average Hourly Daytime Ambient Level, dB(A)	Estimated Increase in Average Hourly Daytime Level, dB(A)
Residences across Atherton from proposed student housing (Bldg. 101)	60 dB(A)	63 dB(A)	2 dB(A)
Whaley Park adjacent to proposed student housing (Bldg. 102)	66 dB(A)	57 dB(A)	9 dB(A)
VA Medical Center across W. Campus Rd. from proposed liberal arts complex (Bldg. 99)	61 dB(A)	57 dB(A)	5 dB(A)
Residences across E. Campus Rd. from proposed parking structure 5 (Bldg. 97)	68 dB(A)	63 dB(A)	6 dB(A)

As indicated in Table 6-3, construction operations are expected to increase the existing ambient noise levels by 5 dB or more at Whaley Park, the VA Medical Center, and at the residences across E. Campus Road. Therefore, the impact is significant at these locations.

Groundborne vibration is measured in terms of the velocity of the vibration oscillations. As with noise, a logarithmic decibel scale (VdB) is used to quantify vibration intensity. When groundborne vibration exceeds 72 to 80 VdB, it is usually perceived as annoying to occupants of residential

buildings. For institutional land uses, the threshold is 75 to 83 VdB. The degree of annoyance is dependent upon individual sensitivity to vibration and the frequency of the vibration events. Typically, vibration levels must exceed 100 VdB before building damage occurs.

The primary vibratory source during the construction of the project will be large bulldozers. Based on published data (Reference 6), typical bulldozer activities generate an approximate vibration level of 87 VdB at a distance of 25 feet. At the distance of the nearest residences to the project site (across E. Campus Road, about 65 feet away) the estimated vibration level will be 79 VdB. This exceeds the City's standard of perceptibility; therefore, the impact is significant at this location.

6.2 Project Operation

The proposed project will introduce a number of new noise sources into the study area. These noise sources include: increased traffic, a soccer field with bleachers and a public address system, activities at the parking structures, and mechanical equipment. Each of these sources is discussed in greater detail in the following sections. Operation of the project will be passive and will not generate ground-borne vibration or groundborne noise levels.

6.2.1 Traffic

Based on data provided by Fehr & Peers/Kaku Associates, analyses were conducted to identify the future traffic noise exposures that will occur in the study area, both with and without the project. The results of the analyses are provided in Table 6-4 for the Cumulative (Year 2020) case. The table identifies the traffic data used in the analysis and the estimated CNEL generated by the traffic. Appendix II provides the complete analysis. Referring to Table 6-4, it may be concluded that:

- The project will increase the traffic-generated CNEL by at most 1.5 dB. This is less than the 5 dB threshold of significance; therefore the impact is not significant.
- Project traffic will not increase the CNEL above the threshold of significance at any off-site properties. Therefore, the impact is not significant.

Table 6-4. Year 2020 Traffic Noise Exposure Levels

Arterial / Reach	Average Daily Traffic		Unmitigated CNEL @ 50'		Change in CNEL Due to Project
	Without Project	With Project	Without Project	With Project	
2ND STREET					
West of Pacific Coast Hwy	48,010	48,010	74.0	74.0	0.0
East of Pacific Coast Hwy	46,590	46,590	70.5	70.5	0.0
7TH STREET					
West of Pacific Coast Hwy	41,700	42,300	72.5	72.5	0.0
East of Pacific Coast Hwy	49,190	49,840	73.0	73.0	0.0
West of Bellflower Bl	48,650	49,388	73.0	73.0	0.0
East of Bellflower Bl	50,980	52,255	73.5	73.5	0.0
West of W Campus Dr	54,260	55,510	73.5	73.5	0.0
East of W Campus Dr	57,120	57,908	74.0	74.0	0.0
West of E Campus Dr	56,850	57,638	74.0	74.0	0.0
East of E Campus Dr	57,980	58,768	74.5	75.0	0.5
ANAHEIM ROAD					
East of Palo Verde Av	11,130	12,618	61.5	62.0	0.5
West of Studebaker Rd	8,940	9,778	60.5	61.0	0.5
East of Studebaker Rd	2,790	2,790	56.5	56.5	0.0
ATHERTON STREET					
West of Bellflower Bl	17,830	17,930	67.5	67.5	0.0
East of Bellflower Bl	22,760	25,160	69.0	69.0	0.0
West of Earl Warren Dr	22,190	24,115	68.5	69.0	0.5
East of Earl Warren Dr	23,090	26,090	69.0	69.5	0.5
West of Merriam Wy	25,130	28,118	69.0	69.5	0.5
East of Merriam Wy	25,830	30,780	69.5	70.0	0.5
West of Palo Verde Av	22,560	27,360	68.5	69.5	1.0
East of Palo Verde Av	13,500	14,263	66.5	67.0	0.5
West of Studerbaker Rd	9,540	10,290	65.0	65.5	0.5
East of Studerbaker Rd	1,420	1,420	58.5	58.5	0.0
BEACH DRIVE					
East of Bellflower Bl	11,320	12,308	61.5	62.0	0.5
West of Earl Warren Dr	11,250	12,238	61.5	62.0	0.5
East of Earl Warren Dr	8,130	8,993	60.5	60.5	0.0
West of Merriam Wy	7,210	8,060	60.0	60.5	0.5
East of Merriam Wy	7,830	9,693	56.0	57.0	1.0

Table 6-4, cont. Year 2020 Traffic Noise Exposure Levels

Arterial / Reach	Average Daily Traffic		Unmitigated CNEL @ 50'		Change in CNEL Due to Project
	Without Project	With Project	Without Project	With Project	
BELLFLOWER BOULEVARD					
North of I-405 NB Ramps	34,590	35,440	70.5	70.5	0.0
South of I-405 NB Ramps	41,650	43,763	71.5	71.5	0.0
North of Los Coyotes Diagonal	38,930	41,055	71.0	71.5	0.5
South of Los Coyotes Diagonal	45,480	48,768	70.5	71.0	0.5
North of Stearns St	37,790	41,078	69.5	70.0	0.5
South of Stearns St	36,620	39,683	69.5	70.0	0.5
North of Atherton St	34,960	38,248	69.5	70.0	0.5
South of Atherton St	33,470	35,083	70.5	70.5	0.0
North of Beach Dr	32,090	33,703	70.5	70.5	0.0
South of Beach Dr	33,230	34,855	70.5	70.5	0.0
North of 7th Street	32,880	34,505	70.5	70.5	0.0
South of 7th Street	19,550	20,038	68.0	68.0	0.0
North of Pacific Coast Hwy	19,140	19,615	68.0	68.0	0.0
South of Pacific Coast Hwy	10,630	10,743	64.5	64.5	0.0
EARL WARREN DRIVE					
South of Atherton St	2,900	4,450	56.5	58.0	1.5
North of Beach Dr	4,630	5,130	58.0	58.5	0.5
EAST CAMPUS ROAD					
North of 7th St	2,840	4,153	57.5	58.5	1.0
FANWOOD AVENUE					
North of Atherton St	940	1,065	53.0	53.5	0.5
LOS COYOTES DIAGONAL					
West of I-405 SB Off-Ramp	24,980	24,980	69.0	69.0	0.0
East of I-405 SB Off-Ramp	34,310	35,148	70.5	70.5	0.0
West of Bellflower Bl	34,100	34,938	70.5	70.5	0.0
East of Bellflower Bl	28,310	28,635	69.5	70.0	0.5
MARGO AVENUE					
South of 7th St	1,970	2,083	56.0	56.0	0.0
MERRIAM WAY					
South of Atherton St	19,440	22,653	64.0	64.5	0.5
North of Beach Dr	5,610	7,473	58.0	59.0	1.0

Table 6-4, cont. Year 2020 Traffic Noise Exposure Levels

Arterial / Reach	Average Daily Traffic		Unmitigated CNEL @ 50'		Change in CNEL Due to Project
	Without Project	With Project	Without Project	With Project	
PACIFIC COAST HIGHWAY					
North of 7th Street	37,610	37,723	72.0	72.0	0.0
South of 7th Street	30,020	30,020	71.0	71.0	0.0
West of Bellflower Bl	28,850	28,850	71.0	71.0	0.0
East of Bellflower Bl	40,320	40,683	72.5	72.5	0.0
North of 2nd Street	48,180	48,543	74.0	74.0	0.0
South of 2nd Street	43,680	44,043	73.5	73.5	0.0
PALO VERDE AVENUE					
North of I-405 NB Ramps	17,570	18,170	66.5	66.5	0.0
South of I-405 NB Ramps	24,210	26,635	68.0	68.0	0.0
North of Woodruff Av	24,410	26,848	68.0	68.0	0.0
South of Woodruff Av	26,480	29,755	68.0	68.5	0.5
North of Stearns St	25,700	28,975	68.0	68.5	0.5
South of Stearns St	23,920	28,183	67.5	68.5	1.0
North of Atherton St	26,150	30,413	68.0	69.0	1.0
South of Atherton St	18,550	21,100	66.5	67.0	0.5
North of Rendina St	19,680	22,218	67.0	67.5	0.5
South of Rendina St	15,340	16,215	66.0	66.0	0.0
North of Parking Structure	15,270	16,158	66.0	66.0	0.0
South of Parking Structure	14,780	15,855	65.5	66.0	0.5
North of Anaheim Rd	15,380	16,455	66.0	66.0	0.0
South of Anaheim Rd	2,690	2,690	57.0	57.0	0.0
RENDINA STREET					
East of Palo Verde Av	1,390	1,390	54.5	54.5	0.0
STATE UNIVERSITY DRIVE					
E Campus Rd to Palo Verde Av	6,400	7,188	60.5	61.0	0.5
STEARNS STREET					
West of Bellflower Bl	15,050	15,050	66.0	66.0	0.0
East of Bellflower Bl	18,040	18,040	66.5	66.5	0.0
West of Palo Verde Av	13,690	13,690	65.5	65.5	0.0
East of Palo Verde Av	15,450	16,438	66.0	66.0	0.0

Table 6-4, cont. Year 2020 Traffic Noise Exposure Levels

Arterial / Reach	Average Daily Traffic		Unmitigated CNEL @ 50'		Change in CNEL Due to Project
	Without Project	With Project	Without Project	With Project	
STUDEBAKER ROAD					
North of I-405 NB On-Ramp	22,350	22,950	68.5	69.0	0.5
South of I-405 NB On-Ramp	23,740	24,340	69.0	69.0	0.0
North of I-405 SB Off-Ramp	23,730	24,330	69.0	69.0	0.0
South of I-405 SB Off-Ramp	25,420	26,020	69.5	69.5	0.0
North of Atherton St	25,670	26,283	69.5	69.5	0.0
South of Atherton St	24,610	25,123	69.0	69.0	0.0
North of Anaheim Rd	23,490	24,003	69.0	69.0	0.0
South of Anaheim Rd	29,300	31,313	71.0	71.0	0.0
North of SR 22 WB Ramps	27,950	29,963	70.5	71.0	0.5
South of SR 22 WB Ramps	37,580	38,668	72.0	72.0	0.0
North of SR 22 EB Ramps	38,450	39,538	72.0	72.0	0.0
South of SR 22 EB Ramps	44,020	44,020	72.5	72.5	0.0
WEST CAMPUS ROAD					
North of 7th St	7,700	8,538	59.0	59.5	0.5
WOODRUFF AVENUE					
West of Palo Verde Av	8,350	9,188	64.5	65.0	0.5

6.2.2 Soccer Field

As part of the proposed project, the existing George Allen Field will be renovated to include bleachers to accommodate 1,000 spectators on the east side, lighting, locker rooms, a small ticket booth, public restrooms, and limited food concessions.

The primary noise sources associated with a soccer game or track meet are spectator cheering and the public address (PA) system. There are also occasional single event sources, such as starter's pistols and referee whistles, which generate noise. It was not possible to obtain noise measurements of a track meet or soccer game due to the seasonal nature of the activities. Therefore, measured data obtained at a high school baseball game with bleacher seating was used in this study. During the measurement, the number of participants and spectators was also noted. Based on this data, and the seating capacity data provided for the proposed bleachers, the measured noise levels could then be 'scaled' to estimate the noise levels that will be generated by capacity crowds at the University for each event.

Based on the measurements, it has been assumed in this report that activities at a typical soccer game or track meet will generate a median (L_{50}) noise level of 64 dB(A) and a maximum noise level (L_{max}) of 78 dB(A) at a distance of 425 feet in front of the bleachers. At positions behind the bleachers the noise levels will be about 10 dB lower due to the directionality of the human voice and shielding provided by the existing buildings to the east. Projecting these noise levels to the nearest residences to the north (about 1,100 feet), yields estimated L_{50} and L_{max} noise levels of 56 dB(A) and 70 dB(A), respectively. At the nearest residences to the east (about 670 feet), the estimated L_{50} and L_{max} noise levels are 50 dB(A) and 64 dB(A), respectively. And at the nearest residences to the west (about 2,800 feet), the estimated L_{50} and L_{max} noise levels are 48 dB(A) and 62 dB(A), respectively.

Using the adjusted noise ordinance standards identified in Table 5-2, and taking into consideration the 5 dB correction for speech content provided in the City's noise ordinance, it may be concluded that the noise levels generated by activities at the proposed field will comply with the exterior daytime standards at the residences north, east and west of the field. Therefore, the impact is not significant.

Adding the estimated activity noise levels to the measured ambient noise levels identified in Table 5-1 yields combined noise levels of 62.5 dB(A) at residences to the north, 55-58.5 dB(A) at the residences to the east, and 52.5 dB(A) at the residences to the west. These estimated increases of 1-2 dB are less than the significance threshold of 5 dB; therefore, the impact is not significant.

6.2.3 Parking Structure Activities

The proposed project will include construction of Parking Structures 4 and 5. The predominant noise sources associated with parking activities include car doors slamming; cars starting; cars accelerating away from the parking stalls; and people talking, shouting and laughing. Measurements taken as part of a previous study have been used to characterize the parking lot noise sources. The results are summarized in Table 6-5.

Table 6-5. Parking Lot Activity Noise Levels

Noise Source	Maximum Noise Levels @ 50' from Source
People shouting/laughing	64.5 dB(A)
Car door slamming	62.5 dB(A)
Car idling	61.0 dB(A)
Car starting	59.5 dB(A)
Car accelerating	54.5 dB(A)

Parking activities will be sporadic in nature, generally occurring primarily in the morning as staff and students arrive, and again in the afternoon when they depart. Less frequent arrivals and departures will occur throughout the day as individual classes begin and end. This will result in low average noise levels that may not be representative of the potential for annoyance at off-site receptors. Therefore, this study considers the maximum noise levels that may be experienced as a result of activities in the parking structures. The nearest proposed facility to the existing residences is Parking Structure 5 at a distance of about 95 feet from the residences across E. Campus Road. At this distance

the maximum noise level will be reduced to about 59 dB(A). This is well below the City's noise ordinance standard of 70 dB(A); therefore, the impact is not significant.

6.2.4 Mechanical Equipment

The proposed upgrades to the Central Plant are expected to be minimal in comparison to its current configuration. As a result, no significant increase in noise level is anticipated.

7 Future Noise Environment at the Project Site

The existing and proposed buildings on the CSULB campus will be exposed to several new noise sources as a result of the proposed project. Each is discussed in the following sections.

7.1 Construction

As indicated in Section 6.1, construction of the proposed improvements will require various demolition, grading, and construction activities. Construction of the project will occur only between 7:00 a.m. and 7:00 p.m. on weekdays, and between 9:00 a.m. and 6:00 p.m. on Saturdays in compliance with the City's standards. There will be no construction activities on Sundays or federal holidays.

Because the proposed project involves in-fill construction on the existing campus, the construction activity will necessarily occur adjacent to several existing and proposed buildings. Referring to Table 6-1, it is anticipated that average noise levels of 75 dB(A) may occur at some of these buildings, and that the existing ambient noise levels are expected to increase by over 5 dB(A). This exceeds the significance threshold; therefore, the impact is significant.

The primary vibratory source during the construction of the project will be large bulldozers. Based on published data (Reference 6), typical bulldozer activities generate an approximate vibration level of 87 VdB at a distance of 25 feet. On the CSULB campus itself, it is possible that vibration will be perceived by occupants of the existing buildings if bulldozers operate within about 40 to 100 feet of them. Therefore, the impact is significant.

7.2 Traffic

Based on data provided by Fehr & Peers/Kaku Associates, an analysis was conducted to identify the future traffic noise exposures that will occur at the campus. The results of our analysis are provided in Appendix II. Referring to the analysis, it is estimated that the future (2020) exterior CNEL will not exceed 70 dB at any proposed building, with the exception of Parking Structure 5, which is not a sensitive use. This complies with the threshold of 70 dB for a school site; therefore, the impact of traffic noise is not significant.

All of the proposed campus buildings will be designed and constructed in accordance with State laws as they pertain to interior noise levels at State campus facilities. Therefore, the impact is not significant.

7.3 Long Beach Airport

Figure 7-1 provides the 1985 Part 150 noise compatibility plan contours for Long Beach Airport. Referring to the figure, it is noted that the CSULB campus is outside the 60 dB contour. Therefore, the impact is not significant.

7.4 Soccer Field

As indicated in Section 6.2.2, it has been assumed in this report that activities at a typical soccer game or track meet generate a median (L_{50}) noise level of 64 dB(A) and a maximum noise level (L_{max}) of 78 dB(A) at a distance of 425 feet in front of the bleachers. At positions behind the bleachers the noise levels will be about 10 dB lower due to the directionality of the human voice. Projecting these noise levels yields estimated L_{50} and L_{max} noise levels of 69 dB(A) and 83 dB(A), respectively, at the nearest existing building east of the bleachers (a distance of about 75 feet). At the nearest building west of the bleachers (a distance of about 620 feet), the estimated L_{50} and L_{max} noise levels are 61 dB(A) and 75 dB(A), respectively.

While these levels exceed the thresholds of significance at the existing campus buildings, this is not considered to be a significant impact because the campus administration has full control over the scheduled activities at the field and will have the authority to stop the sporting events during classroom hours if the noise is affecting educational activities.

7.5 Parking Structure Activities

The proposed project will include construction of Parking Structures 4 and 5. Referring to Table 6-6, activities at the parking structures are expected to generate maximum noise levels of about 64.5 dB(A) at a distance of 50 feet. Projecting this to the distance of the nearest existing or proposed buildings yields maximum noise levels of about 57.5 dB(A) at the nearest building to Parking Structure 4 and about 61 dB(A) at the nearest building to Parking Structure 5. These levels are well below the threshold of 70 dB(A); therefore, the impact is not significant.

7.6 Mechanical Equipment

The proposed upgrades to the Central Plant are expected to be minimal in comparison to its current configuration. As a result, no significant increase in noise level is anticipated.

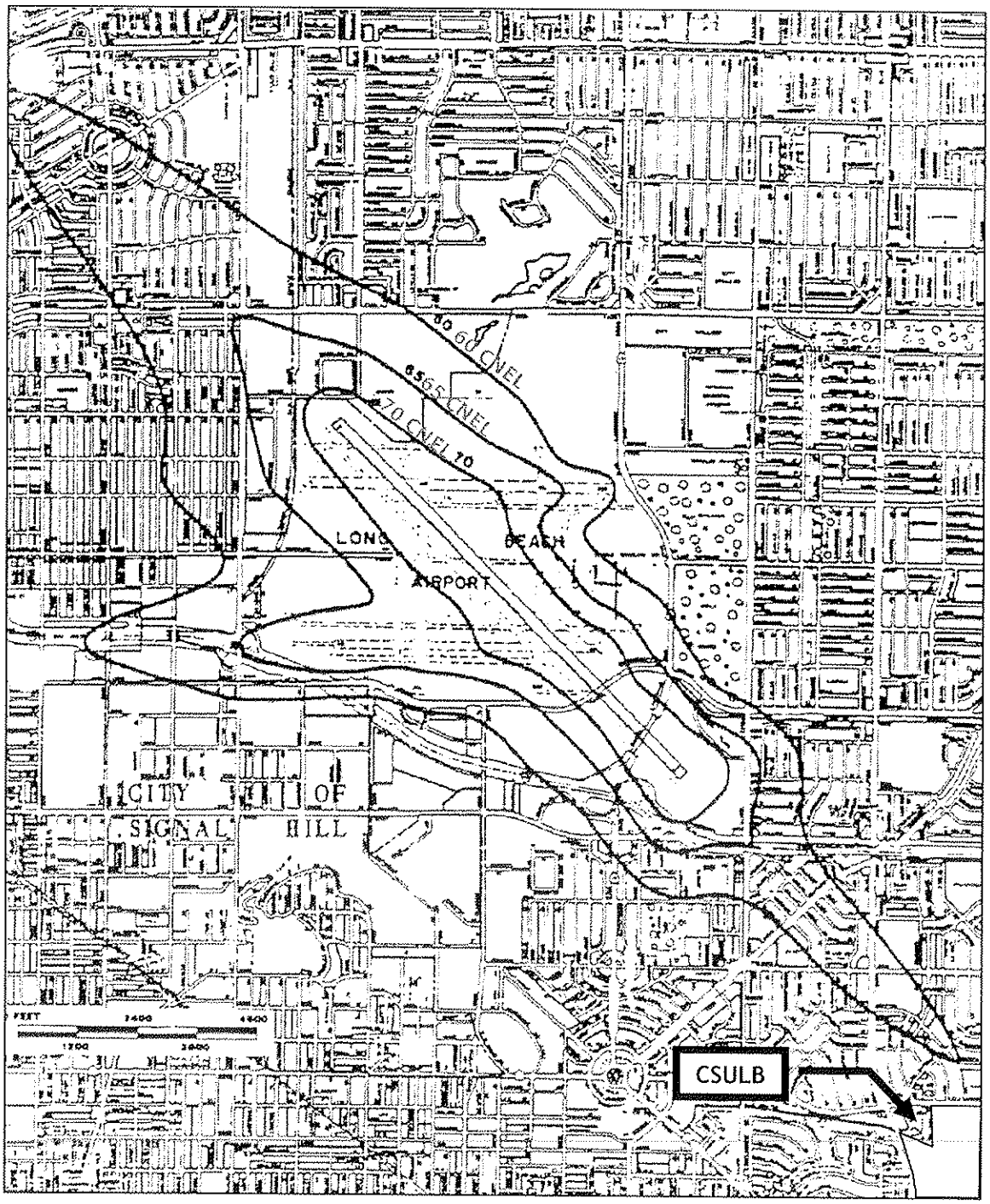


Figure 7-1. 1985 Part 150 Noise Compatibility Plan Contours
(Source: Long Beach Airport Terminal Area Improvement Project Draft EIR)

8 Assessment of Impact

Using the criteria established in this study, the following may be concluded regarding the impact of the proposed project:

- The project will not result in the exposure of persons to generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, the impact is not significant.
- The project will generate excessive groundborne vibration at off-site and on-site receptors. This significant impact will occur during construction of the project at residences on E. Campus Road, and at campus buildings within 40' to 100' of the construction activity.
- The project will not produce a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project as a result of activities at the site. Therefore, the impact is not significant.
- Construction of the project will produce a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. This significant impact will occur at Whaley Park, at the VA Medical Center, at the residences on E. Campus Road, and at campus buildings in the vicinity of the construction zone.
- The project will not result in the exposure of persons residing or working in the project area to excessive noise levels as a result of activities at Long Beach Municipal Airport. Therefore, the impact is not significant.

9 Mitigation Measures

To ensure that noise from athletic events at the soccer field facility on campus continues to be a less than significant impact, the following design and conduct measures will be implemented:

1. Athletic events shall not be staged, and the PA system shall not be operated at George Allen Field, between the hours of 10:00 p.m. and 7:00 a.m. of the following day.
2. The PA system at George Allen Field shall not be used during sports practices.
3. The design of PA system at George Allen Field shall include the following features:
   a. The system shall be configured and calibrated to generate a maximum noise level of 65 dB(A) at the nearest homes. Once calibrated, the system settings shall be 'locked' to ensure that individual users cannot operate them at higher noise levels.
   b. The loudspeakers shall be small and highly directional with a narrow spread.
   c. The loudspeakers shall have sufficient mass that little noise leaks through the cabinet.
   d. The loudspeakers shall be located above the spectators and oriented downwards.

e. The height of the loudspeakers above the spectators shall be minimized in order to permit a lower volume setting.

5. Spectators at sporting events shall not be permitted to use noise-generating devices such as air horns.

The following measures are recommended to reduce noise impacts from construction:

6. Construction activities shall be consistent with the hours and days permitted by the City of Long Beach.

7. Internal combustion engines used for construction purposes shall be equipped with a properly operating muffler of a type recommended by the manufacturer.

10 Significant Unavoidable Impacts

Due to the construction noise levels, and the proximity of the construction activity to the nearby properties and campus buildings, it is not practical to eliminate the temporary increase in ambient noise levels produced by construction activities. Nor is it practical to reduce groundborne vibration to a level of imperceptibility. However, it is noted that all construction noise and vibration levels will be short-term.

To minimize construction noise levels at the nearby properties and campus buildings, the contractor shall comply with the recommendations provided in Section 9.

11 Project Alternative

Only the "No Project" alternative has been considered in this study. Under this alternative, the status quo would be maintained and the proposed project would not be built. However, development in the area would continue in accordance with the City's General Plan and zoning map. Traffic volumes on the streets, and hence traffic noise levels, would increase as the area grows. This is illustrated in Table 6-4 for "Future Year (2020)" conditions.

12 References

1. *Traffic Impact Study for the California State University Long Beach Master Plan, Long Beach, California.* Administrative Draft. Fehr & Peers/Kaku Associates. September 2007.

2. *California State University, Long Beach Campus Master Plan Revision.* California State University, Long Beach and Rossetti/Jorgensen. June 2007.

3. *Noise Element of the General Plan for the City of Long Beach.*

4. *City of Long Beach Municipal Code.*

5. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.* U.S. Environmental Protection Agency. December 31, 1971.

6. *Transit Noise and Vibration Assessment.* Harris, Miller, Miller and Hanson, Inc. April 1995.

7. *Information of Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* U.S. Environmental Protection Agency. March 1974.

8. *FHWA Highway Traffic Noise Prediction Model.* Federal Highway Administration Report No. FHWA-RD-77-108. December 1978.

APPENDIX I

Noise Measurements

Table I-1. Noise Survey

Project: CSULB Master Plan Revision

Position: Adjacent to existing university residences on east side of Earl Warren Drive

Date: October 9, 2007

Time: Noted

Noise Source: Ambient (primarily traffic on Earl Warren Drive)

Distance: Approximate setback of buildings from Earl Warren Drive ≈ 42' from curb

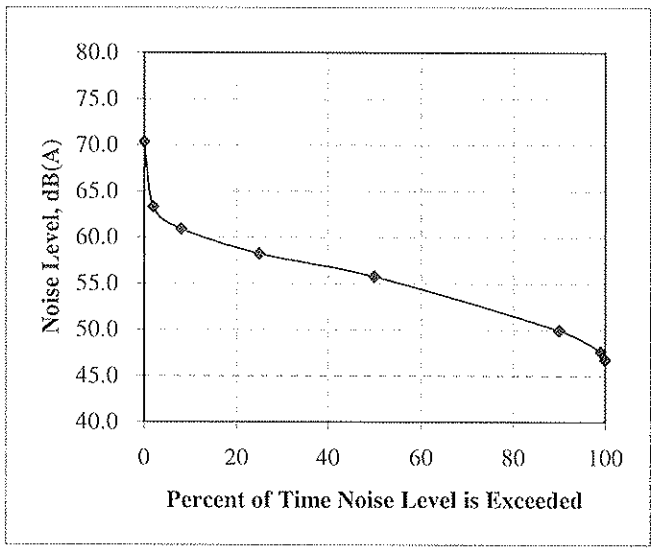
SLM Height: 5'

LD 820 S/N: 0996

LD CAL200 Calibrator S/N: 2916

Operator: Jonathan Higginson

	Measurement Period		
	1:29 PM to 1:55 PM	to	to
n*	Ln	Ln	Ln
2	63.3		
8	60.9		
25	58.2		
50	55.7		
90	49.9		
99	47.6		
Leq	57.2		
Lmax	70.3		
Lmin	46.7		

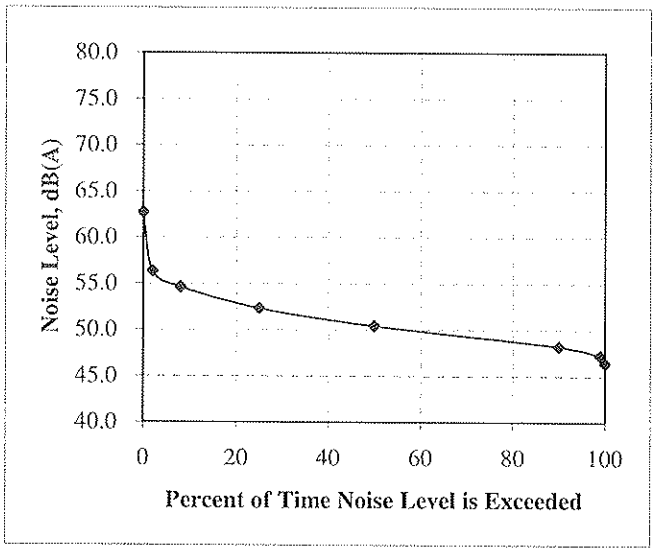


* Leq is the average sound level during the measurement period.
Ln is the sound level exceeded n% of the time during the measurement period.
Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table I-2. Noise Survey

Project:	CSULB Master Plan Revision
Position:	Adjacent to existing university residences on west side of Earl Warren Drive
Date:	October 9, 2007
Time:	Noted
Noise Source:	Ambient (primarily traffic on Earl Warren Drive)
Distance:	Approximate setback of buildings from Earl Warren Drive ≈ 38' from curb
SLM Height:	5'
LD 820 S/N:	0996
LD CAL200 Calibrator S/N:	2916
Operator:	Jonathan Higginson

	Measurement Period		
	2:06 PM to 2:31 PM	to	to
n*	Ln	Ln	Ln
2	56.3		
8	54.6		
25	52.3		
50	50.4		
90	48.2		
99	47.2		
Leq	51.6		
Lmax	62.7		
Lmin	46.4		



* Leq is the average sound level during the measurement period.
Ln is the sound level exceeded n% of the time during the measurement period.
Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table I-3. Noise Survey

Project: CSULB Master Plan Revision

Position: In front of 1800 Tevis Avenue

Date: October 9, 2007

Time: Noted

Noise Source: Ambient (primarily traffic on Atherton)

Distance: 21'6" from curb of Atherton frontage street

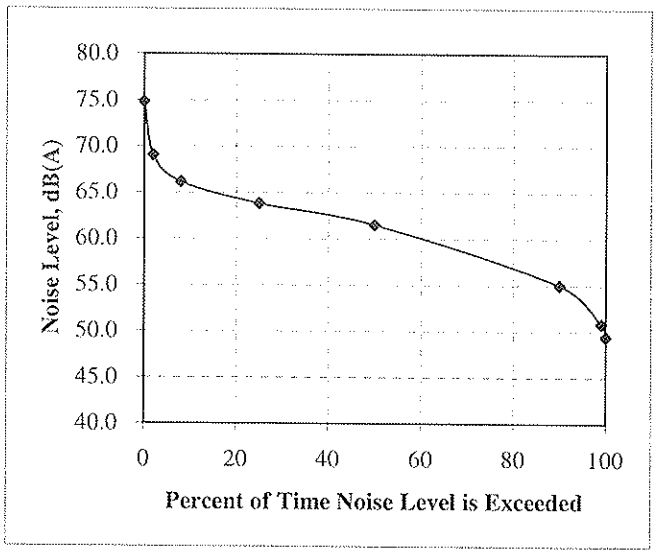
SLM Height: 5'

LD 820 S/N: 0996

LD CAL250 Calibrator S/N: 2966

Operator: Jonathan Higginson

	Measurement Period		
	12:39 PM to 1:06 PM	to	to
n*	Ln	Ln	Ln
2	69.0		
8	66.1		
25	63.8		
50	61.5		
90	55.0		
99	50.8		
Leq	62.8		
Lmax	74.8		
Lmin	49.4		



* Leq is the average sound level during the measurement period.
Ln is the sound level exceeded n% of the time during the measurement period.
Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table I-4. Measured Hourly Noise Levels & Community Noise Equivalent Level, CNEL

Project: CSULB Master Plan Revision
Location: Rear yard of 1531 Hackett Avenue
Date: October 9-10, 2007

Measurement Period	Hourly Noise Level, dB(A)		Measurement Period	Hourly Noise Level, dB(A)
12:00 am - 1:00 am	47.7		12:00 pm - 1:00 pm	58.2
1:00 am - 2:00 am	47.2		1:00 pm - 2:00 pm	58.3
2:00 am - 3:00 am	47.7		2:00 pm - 3:00 pm	58.7
3:00 am - 4:00 am	47.4		3:00 pm - 4:00 pm	60.0
4:00 am - 5:00 am	49.8		4:00 pm - 5:00 pm	57.8
5:00 am - 6:00 am	55.6		5:00 pm - 6:00 pm	59.3
6:00 am - 7:00 am	58.6		6:00 pm - 7:00 pm	58.8
7:00 am - 8:00 am	59.5		7:00 pm - 8:00 pm	58.2
8:00 am - 9:00 am	59.7		8:00 pm - 9:00 pm	57.0
9:00 am - 10:00 am	61.1		9:00 pm - 10:00 pm	56.7
10:00 am -11:00 am	58.0		10:00 pm - 11:00 pm	54.4
11:00 am - 12:00 pm	59.9		11:00 pm - 12:00 am	50.6
			CNEL:	***61.4***

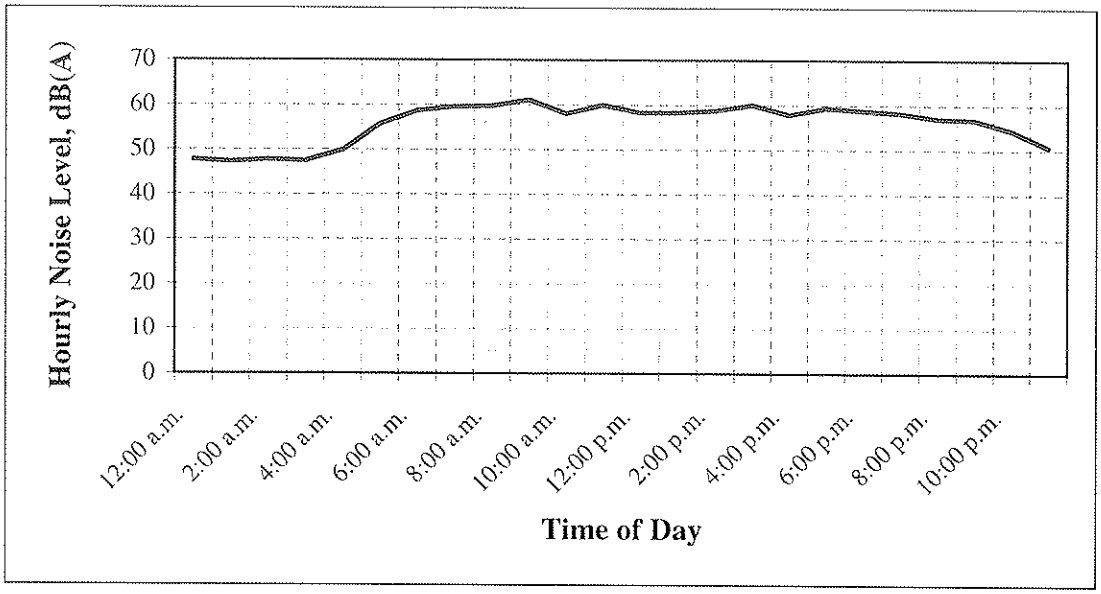


Table I-5. Noise Survey

Project: CSULB Master Plan Revision

Position: Northwest corner of Riviera Circle adjacent to #6201

Date: October 9, 2007

Time: Noted

Noise Source: Ambient (primarily traffic on 7th Street and East Campus Road)

Distance: 10' from block wall between homes and East Campus Road

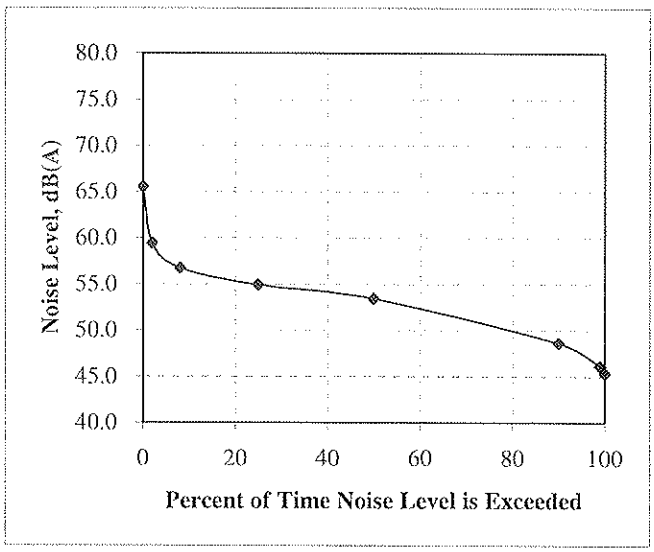
SLM Height: 5'

LD 820 S/N: 0996

LD CAL200 Calibrator S/N: 2916

Operator: Jonathan Higginson

	Measurement Period		
	4:01 PM to 4:21 PM	to	to
n*	Ln	Ln	Ln
2	59.4		
8	56.7		
25	54.9		
50	53.4		
90	48.6		
99	46.1		
Leq	54.1		
Lmax	65.5		
Lmin	45.3		



* Leq is the average sound level during the measurement period.
Ln is the sound level exceeded n% of the time during the measurement period.
Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

APPENDIX II

Traffic Noise Analysis

Table II-1. Distance to Existing (2007) CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy	2007	2007	60dB	65dB	70dB	75dB	80dB
2ND STREET												
West of Pacific Coast Hwy	6	50	AT	1.8%	0.7%	43,320	73.5	490	235	100	---	---
East of Pacific Coast Hwy	4	35	AT	1.8%	0.7%	39,790	70.0	300	130	50	---	---
7TH STREET												
West of Pacific Coast Hwy	5	40	AT	2.0%	2.0%	38,960	72.0	395	185	75	---	---
East of Pacific Coast Hwy	5	40	AT	2.0%	2.0%	45,050	72.5	428	200	83	---	---
West of Bellflower Bl	5	40	AT	2.0%	2.0%	44,550	72.5	428	200	83	---	---
East of Bellflower Bl	5	40	AT	2.0%	2.0%	46,540	73.0	460	215	90	---	---
West of W Campus Dr	5	40	AT	2.0%	2.0%	49,630	73.0	460	215	90	---	---
East of W Campus Dr	5	40	AT	2.0%	2.0%	52,320	73.5	490	235	100	---	---
West of E Campus Dr	5	40	AT	2.0%	2.0%	52,060	73.5	490	235	100	---	---
East of E Campus Dr	6	45	AT	2.0%	2.0%	53,130	74.5	560	278	120	---	---
ANAHEIM ROAD												
East of Palo Verde Av	4	25	AT	1.8%	0.7%	10,450	61.5	69	---	---	---	---
West of Studebaker Rd	4	25	AT	1.8%	0.7%	8,380	60.5	56	---	---	---	---
East of Studebaker Rd	2	25	AT	1.8%	0.7%	2,610	56.0	---	---	---	---	---
ATHERTON STREET												
West of Bellflower Bl	5	40	AT	1.8%	0.7%	16,730	67.5	200	83	---	---	---
East of Bellflower Bl	5	40	AT	1.8%	0.7%	21,130	68.5	235	100	---	---	---
West of Earl Warren Dr	5	40	AT	1.8%	0.7%	20,620	68.5	235	100	---	---	---
East of Earl Warren Dr	5	40	AT	1.8%	0.7%	21,460	68.5	235	100	---	---	---
West of Merriam Wy	5	40	AT	1.8%	0.7%	23,370	69.0	255	110	---	---	---
East of Merriam Wy	5	40	AT	1.8%	0.7%	24,030	69.0	255	110	---	---	---
West of Palo Verde Av	5	40	AT	1.8%	0.7%	20,950	68.5	235	100	---	---	---
East of Palo Verde Av	5	40	AT	1.8%	0.7%	12,460	66.0	155	62	---	---	---
West of Studerbaker Rd	5	40	AT	1.8%	0.7%	8,730	64.5	120	---	---	---	---
East of Studerbaker Rd	2	40	AT	1.8%	0.7%	1,330	58.0	---	---	---	---	---

Table II-1, cont. Distance to Existing (2007) CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks Med.	% Trucks Hvy	Avg. Daily Traffic 2007	CNEL @ 50' From Near Lane C/L 2007	Distance to Existing Contours From Near Lane Centerline, feet 60dB	65dB	70dB	75dB	80dB
BEACH DRIVE												
East of Bellflower Bl	4	25	AT	1.8%	0.7%	10,630	61.5	69	---	---	---	---
West of Earl Warren Dr	4	25	AT	1.8%	0.7%	10,560	61.5	69	---	---	---	---
East of Earl Warren Dr	4	25	AT	1.8%	0.7%	7,630	60.0	50	---	---	---	---
West of Merriam Wy	4	25	AT	1.8%	0.7%	6,770	59.5	---	---	---	---	---
East of Merriam Wy	4	15	AT	1.8%	0.7%	7,350	56.0	---	---	---	---	---
BELLFLOWER BOULEVARD												
North of I-405 NB Ramps	5	40	AT	1.8%	0.7%	28,920	70.0	300	130	50	---	---
South of I-405 NB Ramps	5	40	AT	1.8%	0.7%	35,550	70.5	320	143	56	---	---
North of Los Coyotes Diagonal	5	40	AT	1.8%	0.7%	32,990	70.5	320	143	56	---	---
South of Los Coyotes Diagonal	4	35	AT	1.8%	0.7%	39,840	70.0	300	130	50	---	---
North of Stearns St	4	35	AT	1.8%	0.7%	32,630	69.0	255	110	---	---	---
South of Stearns St	4	35	AT	1.8%	0.7%	35,540	69.5	278	120	---	---	---
North of Atherton St	4	35	AT	1.8%	0.7%	30,740	69.0	255	110	---	---	---
South of Atherton St	5	40	AT	1.8%	0.7%	29,580	70.0	300	130	50	---	---
North of Beach Dr	5	40	AT	1.8%	0.7%	28,280	69.5	278	120	---	---	---
South of Beach Dr	5	40	AT	1.8%	0.7%	29,350	70.0	300	130	50	---	---
North of 7th Street	5	40	AT	1.8%	0.7%	29,010	70.0	300	130	50	---	---
South of 7th Street	5	40	AT	1.8%	0.7%	16,680	67.5	200	83	---	---	---
North of Pacific Coast Hwy	5	40	AT	1.8%	0.7%	16,300	67.5	200	83	---	---	---
South of Pacific Coast Hwy	4	35	AT	1.8%	0.7%	9,190	64.0	110	---	---	---	---
EARL WARREN DRIVE												
South of Atherton St	4	25	AT	1.8%	0.7%	2,720	56.0	---	---	---	---	---
North of Beach Dr	4	25	AT	1.8%	0.7%	4,610	58.0	---	---	---	---	---
EAST CAMPUS ROAD												
North of 7th St	1	25	AT	1.8%	0.7%	2,660	57.0	---	---	---	---	---
FANWOOD AVENUE												
North of Atherton St	1	25	AT	1.8%	0.7%	880	53.0	---	---	---	---	---

Table II-1, cont. Distance to Existing (2007) CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks Med.	% Trucks Hvy	Avg. Daily Traffic 2007	CNEL @ 50' From Near Lane C/L 2007	Distance to Existing Contours From Near Lane Centerline, feet 60dB	65dB	70dB	75dB	80dB
LOS COYOTES DIAGONAL												
West of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	22,630	68.5	235	100	---	---	---
East of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	31,400	70.0	300	130	50	---	---
West of Bellflower Bl	5	40	AT	1.8%	0.7%	31,220	70.0	300	130	50	---	---
East of Bellflower Bl	5	40	AT	1.8%	0.7%	26,490	69.5	278	120	---	---	---
MARGO AVENUE												
South of 7th St	1	25	AT	1.8%	0.7%	1,850	55.5	---	---	---	---	---
MERRIAM WAY												
South of Atherton St	4	25	AT	1.8%	0.7%	18,260	63.5	100	---	---	---	---
North of Beach Dr	1	20	AT	1.8%	0.7%	5,270	57.5	---	---	---	---	---
PACIFIC COAST HIGHWAY												
North of 7th Street	6	45	AT	1.8%	0.7%	31,480	71.0	340	155	62	---	---
South of 7th Street	6	45	AT	1.8%	0.7%	25,170	70.0	300	130	50	---	---
West of Bellflower Bl	6	45	AT	1.8%	0.7%	24,070	70.0	300	130	50	---	---
East of Bellflower Bl	6	45	AT	1.8%	0.7%	33,870	71.5	368	170	69	---	---
North of 2nd Street	6	50	AT	1.8%	0.7%	40,780	73.5	490	235	100	---	---
South of 2nd Street	6	50	AT	1.8%	0.7%	40,040	73.5	490	235	100	---	---

Table II-1, cont. Distance to Existing (2007) CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy	2007	2007	60dB	65dB	70dB	75dB	80dB
PALO VERDE AVENUE												
North of I-405 NB Ramps	4	35	AT	1.8%	0.7%	16,500	66.0	155	62	---	---	---
South of I-405 NB Ramps	4	35	AT	1.8%	0.7%	22,740	67.5	200	83	---	---	---
North of Woodruff Av	4	35	AT	1.8%	0.7%	19,920	67.0	185	75	---	---	---
South of Woodruff Av	4	35	AT	1.8%	0.7%	24,860	68.0	215	90	---	---	---
North of Stearns St	4	35	AT	1.8%	0.7%	24,120	68.0	215	90	---	---	---
South of Stearns St	4	35	AT	1.8%	0.7%	22,460	67.5	200	83	---	---	---
North of Atherton St	4	35	AT	1.8%	0.7%	24,540	68.0	215	90	---	---	---
South of Atherton St	4	35	AT	1.8%	0.7%	17,410	66.5	170	69	---	---	---
North of Rendina St	4	35	AT	1.8%	0.7%	18,470	66.5	170	69	---	---	---
South of Rendina St	4	35	AT	1.8%	0.7%	14,400	65.5	143	56	---	---	---
North of Parking Structure	4	35	AT	1.8%	0.7%	14,340	65.5	143	56	---	---	---
South of Parking Structure	4	35	AT	1.8%	0.7%	13,880	65.5	143	56	---	---	---
North of Anaheim Rd	4	35	AT	1.8%	0.7%	14,440	65.5	143	56	---	---	---
South of Anaheim Rd	1	25	AT	1.8%	0.7%	2,520	57.0	---	---	---	---	---
RENDINA STREET												
East of Palo Verde Av	1	25	AT	1.8%	0.7%	1,300	54.5	---	---	---	---	---
STATE UNIVERSITY DRIVE												
E Campus Rd to Palo Verde Av	1	25	AT	1.8%	0.7%	6,010	60.0	50	---	---	---	---
STEARNS STREET												
West of Bellflower Bl	4	35	AT	1.8%	0.7%	13,150	65.0	130	50	---	---	---
East of Bellflower Bl	4	35	AT	1.8%	0.7%	16,720	66.0	155	62	---	---	---
West of Palo Verde Av	4	35	AT	1.8%	0.7%	12,640	65.0	130	50	---	---	---
East of Palo Verde Av	4	35	AT	1.8%	0.7%	14,300	65.5	143	56	---	---	---

Table II-1, cont. Distance to Existing (2007) CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy	2007	2007	60dB	65dB	70dB	75dB	80dB
STUDEBAKER ROAD												
North of I-405 NB On-Ramp	5	40	AT	1.8%	0.7%	19,320	68.0	215	90	---	---	---
South of I-405 NB On-Ramp	5	40	AT	1.8%	0.7%	20,510	68.5	235	100	---	---	---
North of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	20,510	68.5	235	100	---	---	---
South of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	21,980	68.5	235	100	---	---	---
North of Atherton St	5	40	AT	1.8%	0.7%	22,230	68.5	235	100	---	---	---
South of Atherton St	5	40	AT	1.8%	0.7%	20,990	68.5	235	100	---	---	---
North of Anaheim Rd	5	40	AT	1.8%	0.7%	19,920	68.0	215	90	---	---	---
South of Anaheim Rd	6	45	AT	1.8%	0.7%	25,370	70.0	300	130	50	---	---
North of SR 22 WB Ramps	6	45	AT	1.8%	0.7%	24,120	70.0	300	130	50	---	---
South of SR 22 WB Ramps	6	45	AT	1.8%	0.7%	31,800	71.0	340	155	62	---	---
North of SR 22 EB Ramps	6	45	AT	1.8%	0.7%	31,690	71.0	340	155	62	---	---
South of SR 22 EB Ramps	6	45	AT	1.8%	0.7%	37,480	72.0	395	185	75	---	---
WEST CAMPUS ROAD												
North of 7th St	1	20	AT	1.8%	0.7%	7,230	59.0	---	---	---	---	---
WOODRUFF AVENUE												
West of Palo Verde Av	1	35	AT	1.8%	0.7%	7,840	64.5	120	---	---	---	---

* Arterial Types: 1) 2 lanes, 35 mph or less; 2) 2 lanes, 40 mph; 3) 2 lanes, 45 mph or more; 4) 4-6 lanes, 35 mph or less; 5) 4-6 lanes, 40 mph; 6) 4-6 lanes, 45 mph or more; 7) 4-6 lane freeway, 55 mph or more; 8) 8 lane freeway, 55 mph or more.

Notes:
AT', 'ABOVE', and 'BELOW' refer to the elevation of the arterial relative to the surrounding area.

Table II-2. Distance to Future (2020) Baseline CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks Med.	% Trucks Hvy	Avg. Daily Traffic 2020	CNEL @ 50' From Near Lane C/L 2020	Distance to Existing Contours From Near Lane Centerline, feet 60dB	65dB	70dB	75dB	80dB
2ND STREET												
West of Pacific Coast Hwy	6	50	AT	1.8%	0.7%	48,010	74.0	520	255	110	---	---
East of Pacific Coast Hwy	4	35	AT	1.8%	0.7%	46,590	70.5	320	143	56	---	---
7TH STREET												
West of Pacific Coast Hwy	5	40	AT	2.0%	2.0%	41,700	72.5	428	200	83	---	---
East of Pacific Coast Hwy	5	40	AT	2.0%	2.0%	49,190	73.0	460	215	90	---	---
West of Bellflower Bl	5	40	AT	2.0%	2.0%	48,650	73.0	460	215	90	---	---
East of Bellflower Bl	5	40	AT	2.0%	2.0%	50,980	73.5	490	235	100	---	---
West of W Campus Dr	5	40	AT	2.0%	2.0%	54,260	73.5	490	235	100	---	---
East of W Campus Dr	5	40	AT	2.0%	2.0%	57,120	74.0	520	255	110	---	---
West of E Campus Dr	5	40	AT	2.0%	2.0%	56,850	74.0	520	255	110	---	---
East of E Campus Dr	6	45	AT	2.0%	2.0%	57,980	74.5	560	278	120	---	---
ANAHEIM ROAD												
East of Palo Verde Av	4	25	AT	1.8%	0.7%	11,130	61.5	69	---	---	---	---
West of Studebaker Rd	4	25	AT	1.8%	0.7%	8,940	60.5	56	---	---	---	---
East of Studebaker Rd	2	25	AT	1.8%	0.7%	2,790	56.5	---	---	---	---	---
ATHERTON STREET												
West of Bellflower Bl	5	40	AT	1.8%	0.7%	17,830	67.5	200	83	---	---	---
East of Bellflower Bl	5	40	AT	1.8%	0.7%	22,760	69.0	255	110	---	---	---
West of Earl Warren Dr	5	40	AT	1.8%	0.7%	22,190	68.5	235	100	---	---	---
East of Earl Warren Dr	5	40	AT	1.8%	0.7%	23,090	69.0	255	110	---	---	---
West of Merriam Wy	5	40	AT	1.8%	0.7%	25,130	69.0	255	110	---	---	---
East of Merriam Wy	5	40	AT	1.8%	0.7%	25,830	69.5	278	120	---	---	---
West of Palo Verde Av	5	40	AT	1.8%	0.7%	22,560	68.5	235	100	---	---	---
East of Palo Verde Av	5	40	AT	1.8%	0.7%	13,500	66.5	170	69	---	---	---
West of Studerbaker Rd	5	40	AT	1.8%	0.7%	9,540	65.0	130	50	---	---	---
East of Studerbaker Rd	2	40	AT	1.8%	0.7%	1,420	58.5	---	---	---	---	---

Table II-2, cont. Distance to Future (2020) Baseline CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy	2020	2020	60dB	65dB	70dB	75dB	80dB
BEACH DRIVE												
East of Bellflower Bl	4	25	AT	1.8%	0.7%	11,320	61.5	69	---	---	---	---
West of Earl Warren Dr	4	25	AT	1.8%	0.7%	11,250	61.5	69	---	---	---	---
East of Earl Warren Dr	4	25	AT	1.8%	0.7%	8,130	60.5	56	---	---	---	---
West of Merriam Wy	4	25	AT	1.8%	0.7%	7,210	60.0	50	---	---	---	---
East of Merriam Wy	4	15	AT	1.8%	0.7%	7,830	56.0	---	---	---	---	---
BELLFLOWER BOULEVARD												
North of I-405 NB Ramps	5	40	AT	1.8%	0.7%	34,590	70.5	320	143	56	---	---
South of I-405 NB Ramps	5	40	AT	1.8%	0.7%	41,650	71.5	368	170	69	---	---
North of Los Coyotes Diagonal	5	40	AT	1.8%	0.7%	38,930	71.0	340	155	62	---	---
South of Los Coyotes Diagonal	4	35	AT	1.8%	0.7%	45,480	70.5	320	143	56	---	---
North of Stearns St	4	35	AT	1.8%	0.7%	37,790	69.5	278	120	---	---	---
South of Stearns St	4	35	AT	1.8%	0.7%	36,620	69.5	278	120	---	---	---
North of Atherton St	4	35	AT	1.8%	0.7%	34,960	69.5	278	120	---	---	---
South of Atherton St	5	40	AT	1.8%	0.7%	33,470	70.5	320	143	56	---	---
North of Beach Dr	5	40	AT	1.8%	0.7%	32,090	70.5	320	143	56	---	---
South of Beach Dr	5	40	AT	1.8%	0.7%	33,230	70.5	320	143	56	---	---
North of 7th Street	5	40	AT	1.8%	0.7%	32,880	70.5	320	143	56	---	---
South of 7th Street	5	40	AT	1.8%	0.7%	19,550	68.0	215	90	---	---	---
North of Pacific Coast Hwy	5	40	AT	1.8%	0.7%	19,140	68.0	215	90	---	---	---
South of Pacific Coast Hwy	4	35	AT	1.8%	0.7%	10,630	64.5	120	---	---	---	---
EARL WARREN DRIVE												
South of Atherton St	4	25	AT	1.8%	0.7%	2,900	56.5	---	---	---	---	---
North of Beach Dr	4	25	AT	1.8%	0.7%	4,630	58.0	---	---	---	---	---
EAST CAMPUS ROAD												
North of 7th St	1	25	AT	1.8%	0.7%	2,840	57.5	---	---	---	---	---
FANWOOD AVENUE												
North of Atherton St	1	25	AT	1.8%	0.7%	940	53.0	---	---	---	---	---

Table II-2, cont. Distance to Future (2020) Baseline CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy	2020	2020	60dB	65dB	70dB	75dB	80dB
LOS COYOTES DIAGONAL												
West of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	24,980	69.0	255	110	---	---	---
East of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	34,310	70.5	320	143	56	---	---
West of Bellflower Bl	5	40	AT	1.8%	0.7%	34,100	70.5	320	143	56	---	---
East of Bellflower Bl	5	40	AT	1.8%	0.7%	28,310	69.5	278	120	---	---	---
MARGO AVENUE												
South of 7th St	1	25	AT	1.8%	0.7%	1,970	56.0	---	---	---	---	---
MERRIAM WAY												
South of Atherton St	4	25	AT	1.8%	0.7%	19,440	64.0	110	---	---	---	---
North of Beach Dr	1	20	AT	1.8%	0.7%	5,610	58.0	---	---	---	---	---
PACIFIC COAST HIGHWAY												
North of 7th Street	6	45	AT	1.8%	0.7%	37,610	72.0	395	185	75	---	---
South of 7th Street	6	45	AT	1.8%	0.7%	30,020	71.0	340	155	62	---	---
West of Bellflower Bl	6	45	AT	1.8%	0.7%	28,850	71.0	340	155	62	---	---
East of Bellflower Bl	6	45	AT	1.8%	0.7%	40,320	72.5	428	200	83	---	---
North of 2nd Street	6	50	AT	1.8%	0.7%	48,180	74.0	520	255	110	---	---
South of 2nd Street	6	50	AT	1.8%	0.7%	43,680	73.5	490	235	100	---	---

Table II-2, cont. Distance to Future (2020) Baseline CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy	2020	2020	60dB	65dB	70dB	75dB	80dB
PALO VERDE AVENUE												
North of I-405 NB Ramps	4	35	AT	1.8%	0.7%	17,570	66.5	170	69	---	---	---
South of I-405 NB Ramps	4	35	AT	1.8%	0.7%	24,210	68.0	215	90	---	---	---
North of Woodruff Av	4	35	AT	1.8%	0.7%	24,410	68.0	215	90	---	---	---
South of Woodruff Av	4	35	AT	1.8%	0.7%	26,480	68.0	215	90	---	---	---
North of Stearns St	4	35	AT	1.8%	0.7%	25,700	68.0	215	90	---	---	---
South of Stearns St	4	35	AT	1.8%	0.7%	23,920	67.5	200	83	---	---	---
North of Atherton St	4	35	AT	1.8%	0.7%	26,150	68.0	215	90	---	---	---
South of Atherton St	4	35	AT	1.8%	0.7%	18,550	66.5	170	69	---	---	---
North of Rendina St	4	35	AT	1.8%	0.7%	19,680	67.0	185	75	---	---	---
South of Rendina St	4	35	AT	1.8%	0.7%	15,340	66.0	155	62	---	---	---
North of Parking Structure	4	35	AT	1.8%	0.7%	15,270	66.0	155	62	---	---	---
South of Parking Structure	4	35	AT	1.8%	0.7%	14,780	65.5	143	56	---	---	---
North of Anaheim Rd	4	35	AT	1.8%	0.7%	15,380	66.0	155	62	---	---	---
South of Anaheim Rd	1	25	AT	1.8%	0.7%	2,690	57.0	---	---	---	---	---
RENDINA STREET												
East of Palo Verde Av	1	25	AT	1.8%	0.7%	1,390	54.5	---	---	---	---	---
STATE UNIVERSITY DRIVE												
E Campus Rd to Palo Verde Av	1	25	AT	1.8%	0.7%	6,400	60.5	56	---	---	---	---
STEARNS STREET												
West of Bellflower Bl	4	35	AT	1.8%	0.7%	15,050	66.0	155	62	---	---	---
East of Bellflower Bl	4	35	AT	1.8%	0.7%	18,040	66.5	170	69	---	---	---
West of Palo Verde Av	4	35	AT	1.8%	0.7%	13,690	65.5	143	56	---	---	---
East of Palo Verde Av	4	35	AT	1.8%	0.7%	15,450	66.0	155	62	---	---	---

Table II-2, cont. Distance to Future (2020) Baseline CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy	2020	2020	60dB	65dB	70dB	75dB	80dB
STUDEBAKER ROAD												
North of I-405 NB On-Ramp	5	40	AT	1.8%	0.7%	22,350	68.5	235	100	---	---	---
South of I-405 NB On-Ramp	5	40	AT	1.8%	0.7%	23,740	69.0	255	110	---	---	---
North of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	23,730	69.0	255	110	---	---	---
South of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	25,420	69.5	278	120	---	---	---
North of Atherton St	5	40	AT	1.8%	0.7%	25,670	69.5	278	120	---	---	---
South of Atherton St	5	40	AT	1.8%	0.7%	24,610	69.0	255	110	---	---	---
North of Anaheim Rd	5	40	AT	1.8%	0.7%	23,490	69.0	255	110	---	---	---
South of Anaheim Rd	6	45	AT	1.8%	0.7%	29,300	71.0	340	155	62	---	---
North of SR 22 WB Ramps	6	45	AT	1.8%	0.7%	27,950	70.5	320	143	56	---	---
South of SR 22 WB Ramps	6	45	AT	1.8%	0.7%	37,580	72.0	395	185	75	---	---
North of SR 22 EB Ramps	6	45	AT	1.8%	0.7%	38,450	72.0	395	185	75	---	---
South of SR 22 EB Ramps	6	45	AT	1.8%	0.7%	44,020	72.5	428	200	83	---	---
WEST CAMPUS ROAD												
North of 7th St	1	20	AT	1.8%	0.7%	7,700	59.0	---	---	---	---	---
WOODRUFF AVENUE												
West of Palo Verde Av	1	35	AT	1.8%	0.7%	8,350	64.5	120	---	---	---	---

* Arterial Types: 1) 2 lanes, 35 mph or less; 2) 2 lanes, 40 mph; 3) 2 lanes, 45 mph or more; 4) 4-6 lanes, 35 mph or less; 5) 4-6 lanes, 40 mph; 6) 4-6 lanes, 45 mph or more; 7) 4-6 lane freeway, 55 mph or more; 8) 8 lane freeway, 55 mph or more.

Notes:
AT', 'ABOVE', and 'BELOW' refer to the elevation of the arterial relative to the surrounding area.

Table II-3. Distance to Future (2020) with Project CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy	2020	2020	60dB	65dB	70dB	75dB	80dB
2ND STREET												
West of Pacific Coast Hwy	6	50	AT	1.8%	0.7%	48,010	74.0	520	255	110	---	---
East of Pacific Coast Hwy	4	35	AT	1.8%	0.7%	46,590	70.5	320	143	56	---	---
7TH STREET												
West of Pacific Coast Hwy	5	40	AT	2.0%	2.0%	42,300	72.5	428	200	83	---	---
East of Pacific Coast Hwy	5	40	AT	2.0%	2.0%	49,840	73.0	460	215	90	---	---
West of Bellflower Bl	5	40	AT	2.0%	2.0%	49,388	73.0	460	215	90	---	---
East of Bellflower Bl	5	40	AT	2.0%	2.0%	52,255	73.5	490	235	100	---	---
West of W Campus Dr	5	40	AT	2.0%	2.0%	55,510	73.5	490	235	100	---	---
East of W Campus Dr	5	40	AT	2.0%	2.0%	57,908	74.0	520	255	110	---	---
West of E Campus Dr	5	40	AT	2.0%	2.0%	57,638	74.0	520	255	110	---	---
East of E Campus Dr	6	45	AT	2.0%	2.0%	58,768	75.0	600	300	130	50	---
ANAHEIM ROAD												
East of Palo Verde Av	4	25	AT	1.8%	0.7%	12,618	62.0	75	---	---	---	---
West of Studebaker Rd	4	25	AT	1.8%	0.7%	9,778	61.0	62	---	---	---	---
East of Studebaker Rd	2	25	AT	1.8%	0.7%	2,790	56.5	---	---	---	---	---
ATHERTON STREET												
West of Bellflower Bl	5	40	AT	1.8%	0.7%	17,930	67.5	200	83	---	---	---
East of Bellflower Bl	5	40	AT	1.8%	0.7%	25,160	69.0	255	110	---	---	---
West of Earl Warren Dr	5	40	AT	1.8%	0.7%	24,115	69.0	255	110	---	---	---
East of Earl Warren Dr	5	40	AT	1.8%	0.7%	26,090	69.5	278	120	---	---	---
West of Merriam Wy	5	40	AT	1.8%	0.7%	28,118	69.5	278	120	---	---	---
East of Merriam Wy	5	40	AT	1.8%	0.7%	30,780	70.0	300	130	50	---	---
West of Palo Verde Av	5	40	AT	1.8%	0.7%	27,360	69.5	278	120	---	---	---
East of Palo Verde Av	5	40	AT	1.8%	0.7%	14,263	67.0	185	75	---	---	---
West of Studerbaker Rd	5	40	AT	1.8%	0.7%	10,290	65.5	143	56	---	---	---
East of Studerbaker Rd	2	40	AT	1.8%	0.7%	1,420	58.5	---	---	---	---	---

Table II-3, cont. Distance to Future (2020) with Project CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks Med.	% Trucks Hvy	Avg. Daily Traffic 2020	CNEL @ 50' From Near Lane C/L 2020	Distance to Existing Contours From Near Lane Centerline, feet 60dB	65dB	70dB	75dB	80dB
BEACH DRIVE												
East of Bellflower Bl	4	25	AT	1.8%	0.7%	12,308	62.0	75	---	---	---	---
West of Earl Warren Dr	4	25	AT	1.8%	0.7%	12,238	62.0	75	---	---	---	---
East of Earl Warren Dr	4	25	AT	1.8%	0.7%	8,993	60.5	56	---	---	---	---
West of Merriam Wy	4	25	AT	1.8%	0.7%	8,060	60.5	56	---	---	---	---
East of Merriam Wy	4	15	AT	1.8%	0.7%	9,693	57.0	---	---	---	---	---
BELLFLOWER BOULEVARD												
North of I-405 NB Ramps	5	40	AT	1.8%	0.7%	35,440	70.5	320	143	56	---	---
South of I-405 NB Ramps	5	40	AT	1.8%	0.7%	43,763	71.5	368	170	69	---	---
North of Los Coyotes Diagonal	5	40	AT	1.8%	0.7%	41,055	71.5	368	170	69	---	---
South of Los Coyotes Diagonal	4	35	AT	1.8%	0.7%	48,768	71.0	340	155	62	---	---
North of Stearns St	4	35	AT	1.8%	0.7%	41,078	70.0	300	130	50	---	---
South of Stearns St	4	35	AT	1.8%	0.7%	39,683	70.0	300	130	50	---	---
North of Atherton St	4	35	AT	1.8%	0.7%	38,248	70.0	300	130	50	---	---
South of Atherton St	5	40	AT	1.8%	0.7%	35,083	70.5	320	143	56	---	---
North of Beach Dr	5	40	AT	1.8%	0.7%	33,703	70.5	320	143	56	---	---
South of Beach Dr	5	40	AT	1.8%	0.7%	34,855	70.5	320	143	56	---	---
North of 7th Street	5	40	AT	1.8%	0.7%	34,505	70.5	320	143	56	---	---
South of 7th Street	5	40	AT	1.8%	0.7%	20,038	68.0	215	90	---	---	---
North of Pacific Coast Hwy	5	40	AT	1.8%	0.7%	19,615	68.0	215	90	---	---	---
South of Pacific Coast Hwy	4	35	AT	1.8%	0.7%	10,743	64.5	120	---	---	---	---
EARL WARREN DRIVE												
South of Atherton St	4	25	AT	1.8%	0.7%	4,450	58.0	---	---	---	---	---
North of Beach Dr	4	25	AT	1.8%	0.7%	5,130	58.5	---	---	---	---	---
EAST CAMPUS ROAD												
North of 7th St	1	25	AT	1.8%	0.7%	4,153	58.5	---	---	---	---	---
FANWOOD AVENUE												
North of Atherton St	1	25	AT	1.8%	0.7%	1,065	53.5	---	---	---	---	---

Table II-3, cont. Distance to Future (2020) with Project CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks Med.	% Trucks Hvy	Avg. Daily Traffic 2020	CNEL @ 50' From Near Lane C/L 2020	Distance to Existing Contours From Near Lane Centerline, feet 60dB	65dB	70dB	75dB	80dB
LOS COYOTES DIAGONAL												
West of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	24,980	69.0	255	110	---	---	---
East of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	35,148	70.5	320	143	56	---	---
West of Bellflower Bl	5	40	AT	1.8%	0.7%	34,938	70.5	320	143	56	---	---
East of Bellflower Bl	5	40	AT	1.8%	0.7%	28,635	70.0	300	130	50	---	---
MARGO AVENUE												
South of 7th St	1	25	AT	1.8%	0.7%	2,083	56.0	---	---	---	---	---
MERRIAM WAY												
South of Atherton St	4	25	AT	1.8%	0.7%	22,653	64.5	120	---	---	---	---
North of Beach Dr	1	20	AT	1.8%	0.7%	7,473	59.0	---	---	---	---	---
PACIFIC COAST HIGHWAY												
North of 7th Street	6	45	AT	1.8%	0.7%	37,723	72.0	395	185	75	---	---
South of 7th Street	6	45	AT	1.8%	0.7%	30,020	71.0	340	155	62	---	---
West of Bellflower Bl	6	45	AT	1.8%	0.7%	28,850	71.0	340	155	62	---	---
East of Bellflower Bl	6	45	AT	1.8%	0.7%	40,683	72.5	428	200	83	---	---
North of 2nd Street	6	50	AT	1.8%	0.7%	48,543	74.0	520	255	110	---	---
South of 2nd Street	6	50	AT	1.8%	0.7%	44,043	73.5	490	235	100	---	---

Table II-3, cont. Distance to Future (2020) with Project CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks Med.	% Trucks Hvy	Avg. Daily Traffic 2020	CNEL @ 50' From Near Lane C/L 2020	Distance to Existing Contours From Near Lane Centerline, feet 60dB	65dB	70dB	75dB	80dB
PALO VERDE AVENUE												
North of I-405 NB Ramps	4	35	AT	1.8%	0.7%	18,170	66.5	170	69	---	---	---
South of I-405 NB Ramps	4	35	AT	1.8%	0.7%	26,635	68.0	215	90	---	---	---
North of Woodruff Av	4	35	AT	1.8%	0.7%	26,848	68.0	215	90	---	---	---
South of Woodruff Av	4	35	AT	1.8%	0.7%	29,755	68.5	235	100	---	---	---
North of Stearns St	4	35	AT	1.8%	0.7%	28,975	68.5	235	100	---	---	---
South of Stearns St	4	35	AT	1.8%	0.7%	28,183	68.5	235	100	---	---	---
North of Atherton St	4	35	AT	1.8%	0.7%	30,413	69.0	255	110	---	---	---
South of Atherton St	4	35	AT	1.8%	0.7%	21,100	67.0	185	75	---	---	---
North of Rendina St	4	35	AT	1.8%	0.7%	22,218	67.5	200	83	---	---	---
South of Rendina St	4	35	AT	1.8%	0.7%	16,215	66.0	155	62	---	---	---
North of Parking Structure	4	35	AT	1.8%	0.7%	16,158	66.0	155	62	---	---	---
South of Parking Structure	4	35	AT	1.8%	0.7%	15,855	66.0	155	62	---	---	---
North of Anaheim Rd	4	35	AT	1.8%	0.7%	16,455	66.0	155	62	---	---	---
South of Anaheim Rd	1	25	AT	1.8%	0.7%	2,690	57.0	---	---	---	---	---
RENDINA STREET												
East of Palo Verde Av	1	25	AT	1.8%	0.7%	1,390	54.5	---	---	---	---	---
STATE UNIVERSITY DRIVE												
E Campus Rd to Palo Verde Av	1	25	AT	1.8%	0.7%	7,188	61.0	62	---	---	---	---
STEARNS STREET												
West of Bellflower Bl	4	35	AT	1.8%	0.7%	15,050	66.0	155	62	---	---	---
East of Bellflower Bl	4	35	AT	1.8%	0.7%	18,040	66.5	170	69	---	---	---
West of Palo Verde Av	4	35	AT	1.8%	0.7%	13,690	65.5	143	56	---	---	---
East of Palo Verde Av	4	35	AT	1.8%	0.7%	16,438	66.0	155	62	---	---	---

Table II-3, cont. Distance to Future (2020) with Project CNEL Contour Lines, CSULB Campus Master Plan Revision EIR

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks Med.	% Trucks Hvy	Avg. Daily Traffic 2020	CNEL @ 50' From Near Lane C/L 2020	Distance to Existing Contours From Near Lane Centerline, feet 60dB	65dB	70dB	75dB	80dB
STUDEBAKER ROAD												
North of I-405 NB On-Ramp	5	40	AT	1.8%	0.7%	22,950	69.0	255	110	---	---	---
South of I-405 NB On-Ramp	5	40	AT	1.8%	0.7%	24,340	69.0	255	110	---	---	---
North of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	24,330	69.0	255	110	---	---	---
South of I-405 SB Off-Ramp	5	40	AT	1.8%	0.7%	26,020	69.5	278	120	---	---	---
North of Atherton St	5	40	AT	1.8%	0.7%	26,283	69.5	278	120	---	---	---
South of Atherton St	5	40	AT	1.8%	0.7%	25,123	69.0	255	110	---	---	---
North of Anaheim Rd	5	40	AT	1.8%	0.7%	24,003	69.0	255	110	---	---	---
South of Anaheim Rd	6	45	AT	1.8%	0.7%	31,313	71.0	340	155	62	---	---
North of SR 22 WB Ramps	6	45	AT	1.8%	0.7%	29,963	71.0	340	155	62	---	---
South of SR 22 WB Ramps	6	45	AT	1.8%	0.7%	38,668	72.0	395	185	75	---	---
North of SR 22 EB Ramps	6	45	AT	1.8%	0.7%	39,538	72.0	395	185	75	---	---
South of SR 22 EB Ramps	6	45	AT	1.8%	0.7%	44,020	72.5	428	200	83	---	---
WEST CAMPUS ROAD												
North of 7th St	1	20	AT	1.8%	0.7%	8,538	59.5	---	---	---	---	---
WOODRUFF AVENUE												
West of Palo Verde Av	1	35	AT	1.8%	0.7%	9,188	65.0	130	50	---	---	---

* Arterial Types: 1) 2 lanes, 35 mph or less; 2) 2 lanes, 40 mph; 3) 2 lanes, 45 mph or more; 4) 4-6 lanes, 35 mph or less; 5) 4-6 lanes, 40 mph; 6) 4-6 lanes, 45 mph or more; 7) 4-6 lane freeway, 55 mph or more; 8) 8 lane freeway, 55 mph or more.

Notes:
AT', 'ABOVE', and 'BELOW' refer to the elevation of the arterial relative to the surrounding area.